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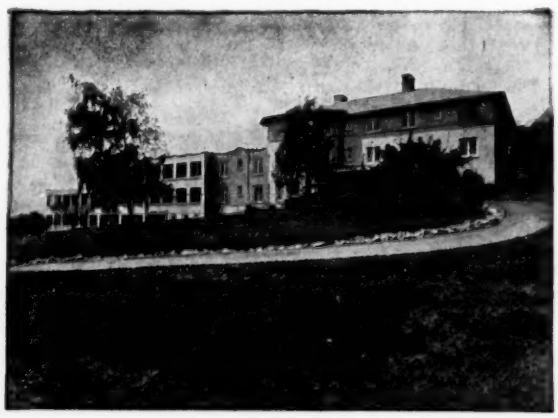

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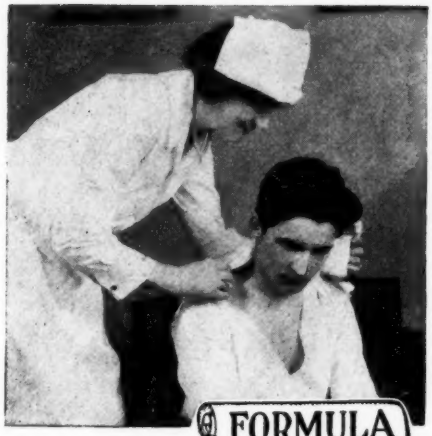

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REVERSE PERISTALSIS AND INDIGESTION

"THERE is accumulating evidence," asserts a distinguished authority on nutrition, in his book on dietetics, "... that a very slow, almost imperceptible reverse peristalsis is an exceedingly common phenomenon and is the real cause of a majority of the symptoms associated with the stomach.... Chronic constipation, or intestinal stasis, is thus being shown to be the cause of most of the disorders of the alimentary canal as well as the origin, through intestinal toxemia, of a vast number of general disorders."

Thanks to the continuous educational work of thousands of physicians and dietitians, there are today many evidences of a growing realization of this cause and effect relation between chronic constipation and disorders of the stomach. Not the least of these evidences is the place which fresh yeast has come to occupy in the nation's diet.

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The mass of authoritative data, both laboratory and clinical, which these researches have yielded, has made increasingly plain the many advantages of fresh yeast in treating disorders having their source in an unhealthy condition of the colon. One of the greatest of these advantages is the effect of yeast in setting up conditions unfavorable to the development of hostile bacteria in the intestine.

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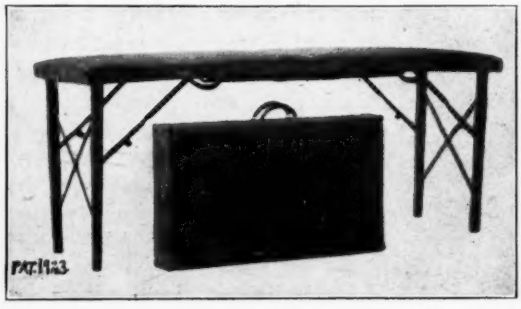

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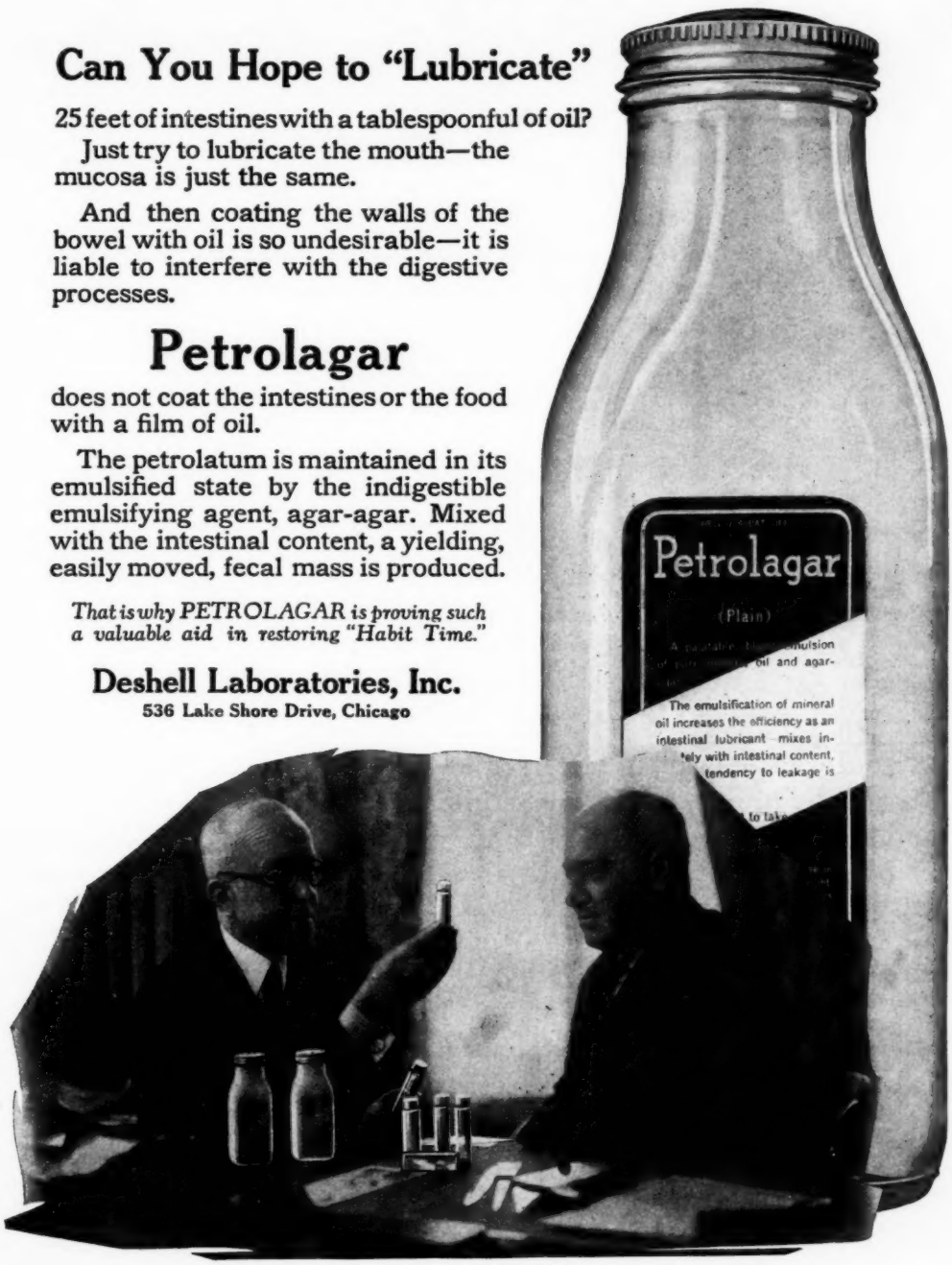
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See report of physicians attending Denver clinic.

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We all had the chance to see and all questions were answered to our satisfaction. We are anxious to recommend your work, and several of us who are undersigned have taken a similar course from other teachers. We declare that your course and instructions are the best and most thorough now offered in this country.

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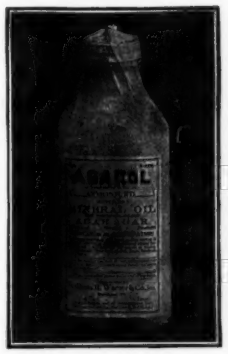

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Vol. XXVI AUGUST, 1927 No. 12

Diabetes—Its Diagnosis and Treatment

STANLEY G. BANDEEN, D.O.
Bush-Bandeen Sanatorium, Louisville, Ky.

II.

INCIDENCE OF DIABETES

I. Increase in the Incidence of Diabetes Mellitus.

Except for the diseases of the arteries, diabetes has increased more rapidly as a cause of death in the registration area of the United States in the first decade of this century than cancer, cerebral hemorrhage and apoplexy, organic diseases of the heart, cirrhosis of the liver, or Bright's disease.

In 1880 the death rate from diabetes was 2.8 per 100,000 in the registration area of the United States and thirty years later, in 1910, it was 14.9 per 100,000. This rapid rate of increase then ceased. From 1910 to 1920 the death rate on the same basis advanced to but 16.1 per 100,000, while in 1915 it rose above that figure, reaching its acme of 17.5 per 100,000. Thereafter it steadily fell until it reached in 1919 the same death rate as in 1910. In the succeeding years since 1919 it has begun to rise, the rate in 1921 being 16.8, and in 1922, 18.4. In 1923 it started down again reaching 17.9, and in 1924, 16.6.

For the total number of diabetics in the United States no accurate figures are available. Since approximately one death out of each fifty in New York City and Boston is due to diabetes one might be tempted to assume that two per cent of the population either have or will have this disease. On this basis the number of diabetics for the United States would be nearly 2,000,000.

All age groups are about equally represented in the statistical increase in diabetes. This is shown by a study of Table I, in which the percentage mortality per 100,000 population in the registration area of the United States of different groups is given for the years 1890 and 1920. This shows that the diabetic mortality per 100,000 in 1920, as compared with 1890, has about doubled. The table also shows that this approximate doubling of mortality holds for each age period. It is true that for the period for forty-five and over the mortality has almost trebled, rising from 20.6 to 57.3. This can be accounted for by the decrease in mortality for the unknown age groups from 13.75 in 1890 to 3.36 in 1920.

TABLE I.

RELATIVE PERCENTAGE MORTALITY PER 100,000 POPULATION OF THE UNITED STATES IN THE REGISTRATION AREA OF DIFFERENT AGE GROUPS IN 1890 AND IN 1920.

1890	
Age group in years	Percentage mortality per 100,000
Under 5	0.96
5-9	0.85
10-14	2.22
15-19	1.90
20-44	3.63
45 and over	20.60
Unknown	13.75

1920	
Age group in years	Percentage mortality per 100,000
Under 5	2.03
5-9	2.83
10-14	4.32
15-19	4.65
20-44	6.46
45 and over	57.30
Unknown	3.36

II. Explanation of the Statistical Increase in Diabetes.

a. Greater Accuracy of Vital Statistics. The increased accuracy of vital statistics in recent years undoubtedly explains to a great extent the apparent increase in diabetes. The development of health departments in our high schools, normal schools, colleges and universities; the organization of health clubs, Boy Scouts, Girl Scouts, and Campfire Girls has all had its influence on the increased accuracy of vital statistics. The war also introduced an entirely new factor and the results of this gigantic etiological and therapeutic experiment in diabetes will be of great significance.

b. More Frequent Urinary Examination. Advocating an annual physical examination and frequent routine urinary tests is the chief cause for the improvement in the vital statistics upon diabetes. Scientific urinary examinations are comparatively

recent. This is shown by the records of a case of diabetes at the Massachusetts General Hospital for the year 1866, where the words, "urine tasted sweet," may be seen in the handwriting of an interne, later a professor in the Harvard Medical School.

c. General Increase in Duration of Life. The prolongation of life throughout the world is an important cause for the apparent increase in the frequency of diabetes. This is much more important in studying diabetes than in the infectious diseases. The infectious diseases are common to the early years of life, and consequently the prolongation of life would not affect their incidence, while with diabetes it would increase because the longer a person lives the more liable he is to this disease. The general mass of the population is moving toward the age of the greatest incidence of diabetes. This is well illustrated in Table II, which presents the approximate age at death from all causes in the registration area of the United States in 1860 and for following years. This average has risen to forty-two years.

TABLE II.

AVERAGE AGE AT DEATH FROM ALL CAUSES IN THE U. S.

Year	Age Years	Year	Age Years
1860	22.7	1915	42.2
1880	26.9	1920	41.9
1900	35.2		

A better figure to consider is the present average expectation of life which is a very different matter than the average age at death. This expectation of life in the United States is now estimated to be fifty-five years.

d. Life Insurance Statistics. The world war contributed to the increase in the percentage of the population which is now insured. Thousands of people who never gave insurance a thought before the war, at that time became convinced of its value through the efforts of the government and took out policies. The increased frequency of urinary examination is due to some extent to the increasing percentage of the population which is insured. Further proof of the important part which insurance examinations occupy in the discovery of diabetes is shown in the following table:

TABLE III.

INCREASED FREQUENCY OF THE DISCOVERY OF DIABETES BY LIFE INSURANCE.

Period	Sex		Discovery by Life Insurance		
	Male	Female	Total %	Males %	Females %
1893-1916	594	406	6	10	0
1916-1920	578	422	9	15	1
1920-1923	524	476	13	22	2

In 1880, one per cent of the population had policies in force; in 1920, 12 per cent were policy holders.

III. Sex Incidence.

It is generally agreed among authorities that males are more subject to diabetes. Statistics in this regard are apt to be misleading as they vary according to individual practitioners. Statistics indicate that in hospitals and dispensaries there is a preponderance of women, while among private patients the men predominate. The men generally will not go to a hospital for treatment until they are so ill that they must enter the wards. In my practice, I find that 64 per cent of the diabetic patients coming to our institution for treatment are women and 36 per cent are men.

Taking the United States as a whole about 57 per cent of the diabetics treated are males, while the mortality statistics in the registration area show that 45 per cent of the males die from diabetes. The fact that more men than women receive special treatment for diabetes and that more women than men die of the disease is evidence in favor of the usefulness of our past methods of treatment. It will take a number of years to prove the effectiveness of the newer methods of treatment, such as insulin and diet, and specific osteopathic manipulation and diet.

We would hardly expect the statistics to show a decrease in the number of cases of morbidity or of mortality. Whenever a new method of treatment is announced for a certain disease there is always developed a keener interest in that malady by the practitioner and, as a result, many cases of that disease will be discovered which would under ordinary conditions never be properly diagnosed.

(Etiology of Diabetes will be the subject of the next article.)

The Innominate Lesion

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The outstanding feature of education in the United States is the compulsory absorption of some one else's opinions. Textbooks are rarely more than a compilation of authorities which our author or compiler deems worthy of consideration. As a rule there is a paucity of opinion on the part of the author of the book. A student finishing a course in college has a conglomerate mass of what other people have thought and his opinions are simply reflections of the thoughts formed perhaps half a century or more before. It is a wonder that anything new gets to the surface. So rarely does a professor allow a student to advance an opinion at variance with so-called recognized authorities, that when one does he is instantly classed as a man who will bear watching by the college authorities, and unless he should prove to be a decided success he will be forced to change his tactics or find another job. I say job advisedly, as a man of that kind looks on his work as a job rather than a position.

The average student leaves college with very little capacity for original thought of any description. He may have a fairly large store of various information, but it had been molded into shape before he got it, and so far as he is concerned the shape will remain the same until "kingdom come." If during his course he ventures an opinion at vari-

ance with his professor, he is instantly overwhelmed with a mass of quotations tagged with names hoary with age, and unless he happens to be a decided radical he is most effectually squelched by the avalanche of authorities and is regarded by his fellows as one to be shunned. Some of these foolhardy folk wont be squelched and if they live long enough and work and think hard enough they may bring something to the front that will change a few opinions, at least, and get a new thought started that will gain ground in spite of all the authorities.

One might think that at this day the facts of anatomy should be so well known that there would be no ground for argument about any of them. Of course we know there are individual variations but certain structures are practically the same in all cases. Thirty years ago there seemed to be no differences in opinion in any of the textbooks as to the sacro-iliac articulation. They were unanimous in declaring that it was a synchondrosis and it was regarded as being absolutely immobile. Then came the osteopaths and they talked so much of the innominate lesion, demonstrated it so clearly by their methods of diagnosis, and obtained such marvelous results by their correction of the condition that the anatomists began to sit up and take notice. The old-fashioned medical man of that day ridiculed the idea that there was such a thing as an innominate lesion in which the bone in question moved in relation to the sacrum, but the osteopaths kept on with their diagnosis and treatment and at last, a few years ago, a couple of medical men actually discovered that the innominate did move and they heralded the fact as their discovery regardless of the fact that osteopaths had been proclaiming the fact for over twenty years before. The late texts of anatomy have modified their old position and we are told that there is a slight movement at the sacro-iliac articulation.

About the first thing that was stressed upon a student's mind at our osteopathic colleges was the importance of the innominate lesion. It might be a factor in any case from colic in a month-old baby to cancer or insanity in the aged. I believe more manipulative technic has been devised to apply to the innominate lesion than all parts of the body structure. Before the ink was dry upon the student's registration, some other student (probably a last year's freshman) had him in a treating room and was working on his innominates and lauding somebody's technic for their correction.

If the new student was sufficiently aggressive he was very likely to be setting innominates on his fellow students before he had attended a class in the school. He was all ready to receive without a question the professor's remarks as to the different ways in which this innominate would rotate posteriorly and anteriorly, slip up and down, forward or backward, and by such movement be responsible for about nine-tenths of all the ills to which humanity is susceptible. After three or four years of such environment he was almost ready to believe that after he went to sleep at night his innominates might take advantage of his unconscious state and go out for a walk. One of the troubles with the osteopaths is that probably not more than five per cent of them have ever intelligently dissected a pelvis. I know for a fact that in my class of about one hundred and fifty none of the pelvic girdles were dissected, not even the one I worked on myself. I never questioned at that time the prevailing idea that the innominate moved quite freely on the sacrum as the professors claimed and I never thought of examining the pelvis to see. I thought I knew all there was to know on the subject and so long as I could remember all the different methods of their correction I would be in the greatest luck that I could expect. I went into practice and set as many innominate lesions as anyone else for several years. I finally began to consider the fact that a great many methods of correction consisted of manipulations that I couldn't figure out as being calculated to bring about a movement at the sacro-iliac articulation, and yet they seemed to get the same results as other manipulations that were more specific in regard to the application of force in line with the joint to be moved. So thoroughly was the idea of the joint's mobility ground into me that when that question arose in my mind I felt as must have felt a heretic in the olden times. I did not say much to my associates for a long time but began to study the structure of the pelvis itself. I was forced to modify my ideas greatly as to the amount of movement that one might expect to find, and evolved some ideas of my own on the probable lesions and methods of their correction. In my practice I found that the new methods worked and for a while I was satisfied. In 1918 I returned to the A. S. O. as a teacher and immediately went to work on the side to learn something about the sacro-iliac articulation from actual dissection. I had no lack of material at the close of every class in dissection, as it was a rare thing to find that any student had opened the pelvic girdle of the cadaver upon which he had worked. The last four years I was with the school I taught principles and technic of osteopathy and in my classes I stressed the fact that the sacro-iliac articulation did not move. Every term after that I would go to the dissection room towards the close of dissection, and invite my students to go with me and demonstrate that there was no movement at this joint. I am sorry to say that (as it had been in my own case as student) the idea of the innominate lesion was so thoroughly established in their minds that most of them would not take the trouble to make the investigation.

Arriving at the laboratory, we would find from six to a dozen pelves from which all muscular tissues had been removed and there was left the bony girdle and the ligaments which held it together. This pelvis was handed to the students and they were asked to try and move the innominates on the sacrum or at the symphysis. In no instance was it possible to demonstrate any movement. Their attention was called to the very easy manner in which the ordinary innominate lesion was reduced in practice. Nothing comparable to the force exerted in our efforts on the actual girdle was required in the reduction of the lesion. When everyone was satisfied that the intact girdle resisted completely any effort they could exert, the symphysis was divided and the effort made to separate the innominates at

this point. By grasping the opposing tubes and ischii and pulling as hard as we were able we could produce a separation of a millimeter or so.

Our next step was the division of the fibrous tissue on the anterior aspect of the sacro-iliac joint and force was then applied at the pubes to separate the bones. In all instances one innominate was torn away from the sacrum accompanied by a tearing sound which was the rupturing of the posterior sacro-iliac ligaments. The other innominate was left firmly attached to the sacrum. In most of these opened joints there was a certain amount of cartilage left upon each of the separated bones as though the cartilage had been separated before the joint had been opened or had split parallel to the bony surfaces as the opening had occurred. The cartilage was not the same thickness on each side of the joint, as at some places the bone could be seen through the cartilage. However, the cartilage presented the same general undulations as do the dry bones, two large convexities on the ilium that fitted closely into concavities on the sacral surface. This was the condition found in most of the pelves examined. On one of these occasions there was a rather small pelvis which, after the division of the symphysis, seemed almost as rigid as it was before such division. It seemed to require more force to tear the innominate from the sacrum and examination of the sacro-iliac surfaces showed that there was a difference. The upper half of the cartilage was firmly attached to the ilium, leaving the opposed sacral surface without any cartilage at all, and in the lower half the cartilage adhered to the sacrum and the corresponding surface of the ilium showed the bone completely denuded of cartilage. There was no break of the cartilage parallel to the joint surfaces. The cartilage was one solid piece from one bone to the other. We then opened the other sacro-iliac and found the same condition there. A solid sheet of cartilage firmly attached to both bones. I looked up the records of the cadaver and found that it was sixteen years old. Upon two other occasions we found the same conditions and the record in both of these cases showed the cadavers were twelve and eighteen years of age respectively.

This was a puzzle to me for some time and it was not until after I had left the school that I was able to account satisfactorily to myself for this phenomenon. The explanation at which I have arrived is this: During the growing period (up to age of twenty to twenty-five years) this cartilage at the sacro-iliac and symphysis pubis functions as an epiphyseal cartilage and growth of the attached bones takes place just as at any other epiphysis in the body. This fact can be demonstrated on any of the laboratory animals such as guinea pigs, cats, dogs, and so on. If one is careful to take a growing animal and clean off the pelvis and open the sacro-iliac joint it will be found that there is no joint space at all in these conditions and that is all the evidence needed to shelve the innominate lesion for all time. These lesions are diagnosed quite as frequently in young children as in anyone else and are treated and corrected in just the same manner, and if there is no space at this joint it is impossible to have any movement without lasting pathology. We all know that if an epiphysis is parted that no more growth takes place in the bone at that part, and it is also an absolute rule that a separated epiphysis never unites again. If movement of such a joint happened, the epiphysis must separate and the result would be a deformed pelvis, the amount of deformity depending upon the age when such separation occurred. The younger the person the greater the resulting deformity. The so-called innominate lesion is common among children, but deformed pelves are rare and practically always can be attributed to rickets when they are found. From these premises I claim that movement at the sacro-iliac articulation never occurs during the growing period or until the individual is at least twenty or more years of age. If a person manages to get along until that age without movements at these joints I do not see that any movement is required after that age is passed. Physiologic movement about the pelvis does not increase noticeably after this age. Some obstetricians claim that certain positions will change the diameters of the pelvis, and that in childbirth the ligaments of the pelvis are softened so as to allow the spreading of the pelvic girdle during the passage of the fetal head. We cannot conceive any spreading of these bones while the cartilage remains intact, and if such spreading did occur the stability of the pelvis would be interfered with to such an extent that walking would be a matter of much difficulty as term approached. But we know on the contrary that walking is the best form of exercise for the expectant mother and the more walking she can do the better she will come through the confinement. Again, take into consideration the number of women who bear children before the growth of the bones is complete, and their pelves continue to grow after such births and develop symmetrically, which speaks against any disturbance of these epiphyseal cartilages. When we consider the manner in which the skull of the child is molded in delivery it is hard to conceive that there is any give in the pelvic girdle at that time.

In 1923 Dr. C. H. Downing came to the A.S.O. and gave a special course in technic. He was accompanied by Dr. R. H. Williams of Kansas City as manager. Before he came I knew of his ideas with regard to the innominates and the dean of the school (Dr. B. D. Turman) intimated to me that discussion of the subject on my part would not be good policy. I attended Dr. Downing's classes and kept quiet until Dr. Williams asked me privately what I thought of the technic. I told him that I did not agree with Dr. Downing regarding the movement of the innominate upon the sacrum and he asked me to discuss the matter before the class. I saw Dr. Turman again and told him that Dr. Williams seemed rather anxious to have such a discussion and he said "go ahead if they want it." The next day I met Dr. Downing on the platform in North Hall having with me a pelvimeter. As in his recent article in the February issue of this A.O.A. Journal, he made the claim that there was a physiological range of movement of each innominate upon the sacrum and the loss of this movement constituted the lesion. This physiological movement

was in the nature of a rotation (anterior and posterior) considering the sacrum as a fixed part of the pelvis, that in walking the innominates rocked alternately on the sacrum, that by manipulation in a normal pelvis he could rotate one innominate anteriorly and the opposite one posteriorly, the rotation occurring about a center somewhere within the limits of the sacro-iliac ligament behind the articulation. I took the stand that if one innominate rotated anteriorly in its upper portion and the opposite one posteriorly in the upper portion there should be a perceptible difference to be noted in the external conjugate diameters, particularly when he claimed that the difference in the height of the internal malleoli (an inch or more) was to be attributed to the upward and downward movement of the acetabuli. The anterior rotation of one innominate accounted for the lengthening of the leg on that side and the posterior rotation of the opposite innominate accounted for the shortening on that side. My contention was that if such rotation occurred, the superior spines would be carried forward on the anteriorly rotated bone and backward on the posteriorly rotated one. Consequently, the measurement from the superior anterior spine on one side of the pelvis to the superior posterior spine of the opposite side would show quite a difference when these changes were made. We measured several pelves before and after his manipulations and failed to find any difference in the relative position of these points. The measurements were made standing and when no difference could be shown he claimed that probably when the individual got up from the table the innominates resumed their normal position as when the first measurement had been made. So that settled nothing. Then some individuals came forward in whom innominate lesions were diagnosed and the measurement was made while the pelvis was in that condition and then Dr. Downing corrected the lesions and measurements were then made, but no difference could be found between the case in lesion and the same case after correction. Dr. Downing made the statement that when a person stooped over forward the innominates both rotated anteriorly and the superior posterior spines of the innominates would spread laterally, and upon resumption of the upright position the superior posterior spines would be approximated. I applied the pelvimeter to these points and the individual bent over and straightened up but no change was registered by the pelvimeter. Dr. Downing took exception to the fact that I applied the pelvimeter to the lateral aspect of the superior posterior spines, and said that he could notice the movement of the spines with his thumbs placed between the spines. I pointed out that the contraction of the erector spinæ mass would interfere with the measurement, owing to the complete relaxation during the stooping and the extreme contraction in the straightening up process. When relaxed there would be very little tissue between the spines, but upon contraction the erector spinæ mass would tend to fill the interspinous space with a mass almost as hard as the bone itself; whereas the external aspect of the spines was covered only by the skin which would not undergo any change during the action. I also claimed that if the external portion of the bone did not move during the test we could not consistently suppose that the interal portion of the bone moved independently.

In his article in the February A. O. A. Journal Dr. Downing speaks of the smoothness of the surfaces of the sacro-iliac as compared to the surface upon which the posterior sacro-iliac ligament attaches immediately behind, and cites this smoothness as evidence that the sacro-iliac is a freely moving articulation, which he classifies as a diarthro-amphiarthrosis. In this connection I suggest that the sacro-iliac surface be compared with that portion of the acetabulum which articulates with the head of the femur, and it will be seen that the sacro-iliac surfaces are not smooth at all but decidedly rough and irregular. The general surface of the innominate is smoother than the auricular surface except where the heavier muscles attach. The sacro-iliac joint has decided irregularities of the opposing surfaces, marked convexities on the ilium coapt perfectly with concavities on the sacrum. In the dry bones the coaptation is not perfect because the cartilage is lacking; but a vivid imagination is needed to claim that such surfaces would ever move on each other in the recent condition. Dr. Downing speaks of separating the sacro-iliac joint on the posterior aspect by an inward rotation of the leg through tension of the posterior portion of the capsule of the hip joint. It is impossible to bring strain upon the capsular ligament by any movement within the normal range, in the first place, and in the second place, all the force that could be exerted by such leverage would be returned through the head of the femur to the innominate itself and the proposition would be the same as a man lifting himself by his boot straps while occupying the boots. Practically the internal rotation would tend to tense all of the external rotators of the thigh, among others the gluteus maximus and the pyriformis, which have their origin on the sacrum itself, and we have the fulcrum in the acetabulum, thus pulling up on the sacrum and forcing downward on the innominate—and how such procedure could produce a separation of the two bones, I cannot see. As I have pointed out in former articles, there is not a single fiber of muscle so arranged to bring about movement between the innominate and sacrum or the innominates at the symphysis, while on the other hand, we have a large mass of non-elastic fibrous tissue—as ligaments—to prevent any such movement.

To recapitulate, we have the following facts which would militate against movement at this articulation:

(1) The irregular surface of the opposing bones. On the sacrum are two well developed concavities which receive convexities of the iliac surface so closely coapting that no gliding could take place without a separation of the innominata from the sacrum behind the articulation or from each other at the symphysis.

(2) The fact that the two surfaces are exactly of the same size makes movement impossible unless

a non-articular surface comes into contact with an opposing articular surface.

(3) The roughness of the surfaces as compared with a surface that we know to be freely movable, such as the acetabulum.

(4) The close coaptation of the surfaces throughout their entirety as compared to the difference in curvature of freely moving joints; e. g., the extension of the acetabular surface to a complete sphere would give us a much larger sphere than would a similar extension of the head of the femur. Again, compare the curvature of the glenoid fossa with that of the head of the humerus. This difference provides a minimum contact of the articulating surfaces and this minimal contact changes with the slightest movement of the joint.

(5) The edges of the opposing surfaces present a marked projection toward the opposite bone; whereas the edge of movable articulations are perfectly smooth in extension of the articular surface.

(6) The mass of the sacro-iliac posteriorly and the mass of the symphysis anteriorly speak against any movement of structures so united.

(7) The fact that there is no free space between these bones until after the individual has attained full growth.

(9) The absence of any muscular tissue so arranged to bring about specific movement at this joint.

(10) The mechanical necessity for rigidity of the pelvis as a structure upon which the trunk and leg movements may be accomplished.

This article is written with the idea that the practice of osteopathy should be based on truth, and the claim that we find a condition of the innominates that is not so based will always be a stumbling block to a bona fide anatomist. So far this paper will no doubt seem destructive to the majority of our profession, but I now propose to make it constructive and upon a basis that no anatomist can dispute.

We all know that we find conditions in which, when the patient is laid on the back and we examine the position of the internal malleoli, appearances would point to an inequality in the length of the legs. We know there has not been any actual change in the length of the legs but the internal malleoli are at different levels. The usual method was to locate the presenting symptoms and according to the side upon which they were prominent the diagnosis would refer to that side.

If the symptoms were pronounced on the side upon which the leg appeared long an anterior innominate was diagnosed on that side; if on the side of the shortened leg it was a posterior innominate on that side. Manipulation to correct these conditions and bring the malleoli to the same level was in order and was sometimes almost miraculous in alleviating the symptoms. I should feel almost criminal if I were to try to discredit this innominate lesion idea if I had nothing to offer in its place. How may we account for the condition and still maintain the idea of the pelvis as a rigid unit of structure? The explanation I offer is a rotation of the pelvis under the fifth lumbar vertebra. In this rotation the pelvis is backward and lower on one side while forward and upward on the other. It is really a combination rotation and tilt of the pelvis in relation to the fifth lumbar. Accompanying this movement of the pelvis there is a scoliosis of the lumbar spine that will accentuate the discrepancy of the level of the pelvis. Upon the shorter side there is a contraction of the erector spinæ, iliocostalis and quadratus lumborum so that by this muscular tension the high side of the pelvis is drawn still higher and in some of these cases the difference at the internal malleoli may be almost two inches. It is a fact that a normal individual lying on the back can easily produce the same difference by an unilateral contraction of the aforementioned muscles. It is also a fact that all of the manipulations calculated to correct the old style innominate lesion will also bring about movement at the sacrolumbar articulation and also tend to straighten the lumbar spine. The amount of actual rotation that may be obtained at the lumbosacral articulation varies greatly in different individuals. The posterior zygapophyses at this articulation are usually of the lumbar type; i. e., the lower pair face inward and the upper pair outward. But this is not an absolute rule. I have a pelvis and fifth lumbar vertebra in my office in which the zygapophyses on the sacrum face backward and inward so that perpendiculars erected on them would meet some four or five inches in a posterior direction. Taking into consideration the intervertebral disc it is impossible to imagine any horizontal rotation in such an articulation; forward and backward bending would be all the movement at this point. In such a case if there should be a disturbance of the internal malleoli it would be dependent on a combined scoliosis and rotation higher up in the spine. In the dissection laboratory at the A. S. O. I came across some very peculiar conditions at the sacrolumbar articulation. I remember one instance where the zygapophyses on one side were typically of the lumbar type, while on the other side they were of the dorsal type. Again I saw some in which both sides showed a purely dorsal type and this would allow a very free and wide rotation.

A very common manipulation for the innominate lesion is to place the patient on his side, and standing in front of him, rotate the shoulder backward and when the spine is tensed by this means thrust the pelvis forward with the other hand or elbow as preferred. Now I defy any person to show how the innominate can be moved on the sacrum by this force, but it is calculated very nicely to bring a rotation at the lumbosacral joint.

There are many forms of technic which will get results in these cases, and I have no quarrel with any of them. Each individual operator will develop his own particular technic as he perfects himself in his work. Probably no two of us work exactly in the same manner, and so long as we get results it does not matter what technic we use; but one thing I am concerned about is the use of a term in diagnosis that is altogether at variance with the facts of anatomy.

Mental Hygiene*

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The study of mental hygiene is not the study of a new subject, it is throwing the spotlight on fact which has always been handled but not always understood. Mental hygiene is not another cure—an insulin, an Abrams, or a ray of any hue—but is an additional understanding which will make therapeutic service more complete.

In a profession which concentrates its interest upon an organic mechanism to be handled, manipulated, adjusted, there is danger of underemphasis upon the controlling mechanism which cannot be handled. The great mental dynamo which may be generating either health and happiness or ills and despair is in danger of being disregarded.

The difference between a blood and body physician and a blood and body physician with psychiatric understanding is the difference between the tinker and the master mechanic. The tinker knows eight or ten joints, bolts and screws that may be the matter, and if they aren't they ought to be. But the master mechanic knows his battery and electrical control as well as the machinery which it drives. He knows his engine as a whole of many parts which should be synchronizing. The tinker knows the joints. In the same way the limited physician knows a certain number of lesions and probable conditions to look for. If these conditions do not exist, he shrugs his shoulders, says his patient's trouble is all in his head, and fails with that case. The physician with the psychiatric slant, however, must look into personality as a whole. He recognizes that all connotations are dependent upon all organs, the environment and their linking medium, the nervous system, taken together. Psychology is no longer a study of hypothetic cerebration. It is fundamentally a study of physiology. Psychology and the mind reach to the finger tips and as far beyond as there is control. Osteopaths are using psychology every day in a form far more significant than just transfer and direction of thought.

Mental hygiene, as has all therapy, has two expressions: the prevention of illness and the correction of illness. Fascinating as the work of prevention of mental disease is, it finds application chiefly in the social service and educational pursuits. To the physician the importance of mental hygiene in its relation to mental diseases is of greatest interest. But the illnesses from an unhygienic and unhealthy mind show two definite courses. These are mental and physical.

That the physical organic make-up can be upset in severe cases of mental ill health, has been readily recognized. But that milder forms of mental distress may lead to physical and organic unbalance is a fact which has known neglect. The scientific, simple, physiological facts of this case read like a novel in Dr. Walter B. Cannon's work, "Bodily Changes in Hunger, Fear, Rage and Pain." It is a report of experiments made in Harvard Medical College, and a report every physician should be wholly familiar with. It, and other reports of identical results in similar experiments, may well serve as authority to the man whose convictions are open to recognize the interrelation of mind and body. Dr. Cannon worked with animals and with students. He brought together cages containing animals that were natural enemies. After the ensuing row, he studied the physiological condition of the animals. He studied students who had just finished a rigorous football game; those who had sat on the substitutes' bench in a welter of excitement over the possible call into action; and students from the bleachers who had taken it all out in howling. He examined students after hours of recreation and after hours of study; men in throes of despair and men drifting airily down life's college stream. His volumn of returns divides itself into two great fundamental groups of determinations.

FUNCTIONS OF NERVOUS STRUCTURES

Careful observation shows that physiologically and anatomically the nervous structures of the body are built for combat, that they are set up in opposition.

The *cranial nerves* function to build up reserve, to conserve energy, to fortify the body against stress. They direct the processes of digestion and upbuilding.

The *sacral nerves* are emptying in function. They lead to greater comfort and to the continuity of the race.

The *fibers of the sympathetic* of the thoracolumbar region are outlets for the major emotions—pain, rage, fear. These are the emotions and responses which accomplish race and individual preservation. And they are always able to overwhelm the conditions established by cranial and sacral nerves. That is, an emotion of fear or of rage can overthrow, at any time, the most careful patterns of bodily upbuilding and bodily comfort. I need not point out to you the gamut of organic changes which emotions can produce as they flow out from the central nervous system to periphery reaction through the thoracolumbar region. This consideration leads to the second phase of the report, namely, what functions vary with the mental state?

EFFECTS OF VARIATIONS IN MENTAL STATE

Cannon and others report that a variation in mental tenor effects: (1) pancreatic, salivary, gastric and biliary secretions; (2) gastro-intestinal contractions; (3) assimilation and absorption of sugar; (4) muscle fatigue and recovery from same; (5) respiratory movements; (6) relaxation of bronchioles; (7) alteration in the distribution of blood; (8) coagulation of blood; (9) nerve irritability; (10) circulatory movements.

They report further that certain emotional states enhance functional activities. These emotions are notably the ones which man himself has classified as the happy, desirable emotions: joy, mirth, comfort, congeniality, friendship, love. While the discomforting emotions check functional activity. This is probably why we recognize them as un-

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comfortable. And a check on functional activity can not but result in physical ills.

The significant fact is that the mental state is brooding over the functional state at all times, and a secret sorrow may crop out as dyspepsia in a place where secret sorrow is least suspected.

ABNORMAL BEHAVIOR

Now let us consider mental ills. Under the present status are they sufficient to warrant concern? Well, the number of insane in hospitals equals the number of students in colleges. The number of insane beds exceeds the number of hospital beds. That means there is more insanity than all other hospital conditions put together, and not including the epileptics and feeble-minded. There is much mental suffering that never gets to a hospital which might be avoided. There is everywhere recognized an appalling increase in nervous disorders, especially among the young. Abnormal behavior is an expression of mental ill health. Here we have what would be normal conduct repressed until it breaks out into bizarre patterns which society can never recognize as of its own making. There are thirty forms of mental and nervous disorder, and they all have a cause and a course and an outcome the same as any disease. Delinquency and crime are also forms of mental disorder. It is not surprising that clinical history of an increase in mental disease and legal history of an increase in crime run parallel. The same causes and environment may be contributing to both.

The Manhattan State Hospital for Insane of New York shows the following record:

Twenty per cent of the cases are due to syphilis, twenty to alcohol, ten per cent to trauma and infection, and the remaining fifty per cent are caused by behavior. Fifty per cent of these cases could have been prevented or modified by mental hygiene. Mental health depends upon the ability and equipment to meet life. Mental ill health may be due to inadequate constitutions or inadequate educational equipment for life.

To summarize, careful experimentation and research prove that the great nervous systems are set for opposition in control; that emotions produce physical and physiological change; that emotions are in opposition, some enhancing, some interfering with normal function. So we must conclude that mental health and physical health are closely related. And that mental illness cannot be neglected as a contributing factor to physical illness.

THE DEFENSE MECHANISM OF MAN

Now why should there be emotions which cause physical illness? Why should there be fears sufficient to cause indigestion? How can there be a mental condition capable of producing blindness when the optical apparatus is all intact? It is because the simple rule that Nature tends to ease and happiness cannot find its simple and normal way to solution. The way may be blocked by structural deficiencies, or it may be closed by ungoverned cerebration of that great biped of the species homosapiens. The check of civilization, so-called,—the defense mechanism of man, is the cause of most of the trouble. Why the puritanic conviction that joys of the flesh, including color, music, light and song were sin? Because Nature, evolving naturally, produced demands and created desires which the Puritan did not have the courage to face. This deficiency in courage may have been due to insufficient internal gland secretion, and that in turn may have been a nutrition problem. But the Puritan ended up by sidestepping perfectly legitimate demands of the body. His responses were not diminished, they were distorted. They were still normal in amount but exaggerated in expression. Costume balls and historical pageants depict the becomingness of Puritan dress. Puritan pumps are still in demand among women making no claim to demureness as an aim in dressing. Hester Prynnes's scarlet letter was decorative and described as beautiful. Remnants of the old convictions that have found their cobwebby way into the present are still unconvincing. Nature still persists in demands. The tight-fitting basque of the communist maid outlines and accentuates curves which the straight blouse and rigid diet of the flapper have left entirely out of the reckoning. The seductive swirls of a long full skirt are more effective than the lank, straight, knee-high bag our female youth affects. Hair is a distinct sex factor. The woman who loves a bald-headed man loves him because he has something else to offer. No woman ever loved a man because he was bald, but in spite of it. Still men of a certain aggressively "pure" type wear hair all over their heads and all about their faces and heaven protect them from the shearing blight. All this in substantiation of a 100 per cent pure complex! And that such expressions accompany an ill health of mind is attested by indulgence in hideous punishments for witchcraft; the presence of subnormal minds and homosexuality in communities, and the House-of-David sort of scandal.

To be sure, in the course of Nature's finding its simple, easy way to happiness, certain social distinctions must be made. The simpler the adjustment to society every individual is conscious of making, the better. How satisfactorily and how healthily his adjustment will be accomplished, depends upon education, environment, training, innate capacity and understanding. To build these components into an adjustment which is satisfactory and healthy requires a knowledge of the mechanism which governs them.

The mental mechanism is a thrilling phenomenon. Nerve energy is produced by the stimulation of myriads of irritable nerve endings that lie with their raw surfaces exposed to environment and society. The eye, the ear, the sense of touch, the temperature ends are all examples. When sensitive nerve ends are flicked, energy is produced and passed along the peripheral nerves like electricity on a cable. It accumulates around three cores in the central nervous system. There are three great trunks through which this energy may find outlet: in the expression of self, the ego; in expression of self in relation to the group, the herd; and in expression of self in relation to sex. Around each core patterns of association and habits of conduct are built. These determine through what direction

energy accumulated at the pole will find outlet. When there is a satisfactory outlet which satisfies society, there is mental health. When, however, habits of conduct built around the core are inadequate to release accumulated energy, or are of a pattern that society disapproves, there is trouble.

CAUSES OF MENTAL DISORDER

In considering a condition of mental disorder it must be studied from the viewpoint of the three cores of seething energy and with a knowledge of three periods of development. Is the subject having an opportunity to express himself and recognize himself as an individual? Does he take his place in the group, appreciating and being appreciated by those with whom he associates? Is he having satisfactory expression for his sex drive either directly or through adequate substitution, which is very difficult to accomplish? And if there is a block to these expressions, turn to the incidents of development. For in the circumstances of growth may be found much of the cause for inadequate outlet of nervous energy.

In childhood the deepest grooves of conduct are built. They are so deep that whatever direction nerve energy may take in conduct, they can still be governed by experiences that are long since forgot. It took a psychoanalyst to show one man that his unreasoning distaste for navy blue suits dated back to one his stepfather wore in the childhood period of severe punishments.

Or mental habits that are never lost may be built in the hectic adolescent period. They may be habits that are well enough, perhaps, as makeshifts of a distressed child groping between childhood and adulthood, but they are entirely inadequate when carried over. During this period, when a child is thrust into a maelstrom of emotions while the chemical shift between endocrin balance of childhood and endocrin balance of adulthood takes place, he forms habits, mental patterns, which may influence his conduct throughout life. An adolescent reaction to a situation is to be expected from a sixteen-year-old. But sixteen-year-old conduct from a forty-year-old woman is not healthy.

The third period of development includes the sum total of all other growths plus the reactions the individual makes to what society demands of an adult. No mental disorder can be understood or corrected without at least a partial answer to the question: How is the passage of nervous energy from the cores of ego, herd and sex blocked or hindered by events of childhood, adolesence and the demands of adulthood?

When the balance of these factors produce a state of mental ill health which is not insanity but maladjustment, certain definite types of personality appear. These include the introvert, the extrovert, the one who feels inferior, the overcompensating type, the sexual pervert, the defensive type, the individual unable to face reality. Fantasies, illusions, hallucinations, pathologic lying, stealing, etc., appear.

To such conditions, a healthy adjustment can be made only by recognizing the individual's needs, the surges of energy which must have outlet, and which when checked produce organic disfunction and mental abnormalities and aberrations. When there is a check, it must be faced. Is it valid? If so, the only adjustment is to make the best of it. There can be no doubt of the block on Ben Turpin's ego. But he has adjusted by capitalizing his handicap. Until now, while he still may not view his face with great joy, there surely must be some satisfaction in the price others will pay to view the same face on the screen. Mental health consists of removing imagined blocks to the release of energy, and making the best of valid blocks.

Education in mental health insures life satisfaction and happiness; living most and serving best; doing at maximum what one probably would do anyway; health against nervous ills; health against physical ills; health against insanity. With this in view it would seem logical that, if prevention is the coming science, and osteopathy is the therapy par excellence for expressing and developing that science, mental hygiene has a right and a claim upon osteopathic curricula and physicians.

Diagnostic Signs and Symptoms of Rectal Disease*

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In preparing this paper I have tried to avoid the most uncommon of diseases of the rectum. In the time allowed me it seemed best to cover such conditions as will probably present themselves in the every-day work of the busy general practitioner. I hope to do my bit in encouraging rectal diagnosis and examination and to bring before you again the thought that the lives of many may be relieved of suffering and prolonged by proper treatment of the rectal disease seen so frequently by the proctologist and often overlooked by the doctor who does not inquire regarding rectal diseases and thoroughly examine when symptoms indicate the necessity for it.

Those of us who specialize in the treatment of rectal diseases are thoroughly familiar with the fact that the only reliable method of diagnosing these conditions is by examination. This statement, I am sure, will be confirmed by every physician doing rectal work. There are, however, many signs and symptoms which are quite definitely of diagnostic significance and some, such as bleeding, which represent final and absolute demand that competent local examination be made.

*Read before the A. O. A. Convention, Louisville, 1926.

We should bear in mind that disturbances at distant parts of the body are often due to rectal disease. Disturbances of digestion and menstruation may be traced to the rectum. Headache, backache, sciatica, joint pains, anemia, and even epilepsy, asthma and acne vulgaris are sometimes remote evidences of disease in the lower bowel. That general nervous manifestations are common results of rectal disease, is well known to every physician.

Hirshman states: "It has been estimated that one patient out of every seven is suffering from some disease, the relief of which would be assisted, or entirely accomplished, by treatment of pathological conditions discovered only on rectal examination."

BLEEDING

Bleeding is not only a common symptom, but the most important symptom accompanying diseases of the rectum. No case of bleeding from the rectum should be allowed to go without complete local examination. Generally, bright red blood is due to some anal condition, but may come from points as high as the sigmoid. Blood may be mixed with feces, mucus, pus, or fragments of tissue. It may be fluid or clotted. When dark in color it is generally from points above the rectum. The amount may vary from a drop or two to a profuse flow. The causes may be:

1. Malignant disease
2. Internal hemorrhoids
3. Trauma
4. Fissure
5. Ulceration
6. Polyposis
7. Prolapse
8. Stricture
9. Proctitis
10. Fecal impaction
11. Dysentery
12. Less common causes, such as intussusception, congestion of the portal vein, chancroids, chancres, and ulcerative colitis.

The important matter in rectal bleeding is the possibility of cancer. The fact that the patient has had bleeding for years is not reassuring, but additional warning that the possibility of cancer is greater than in a new case. The patient's statement that he has "bleeding piles" is of no value whatever. Complete examination should be made and the source of the bleeding determined. Lives are saved only when early diagnosis of rectal cancer is made. The neglected hemorrhoids of today are to be the cancers of the future.

Bleeding due to fissure is generally slight—perhaps only a few drops, or the stools may be blood streaked. The bleeding from cancer, ulcers, or internal hemorrhoids may be scanty or profuse. Profuse bleeding accompanied by much protrusion is generally due to internal hemorrhoids. Sudden serious hemorrhage within the bowel or rectum is accompanied by the usual symptoms of internal hemorrhage. There is an incessant desire to defecate, with intense colic, marked abdominal distension, and sensation of fullness in the rectum. Death will probably result if the hemorrhage is not promptly arrested.

Bleeding is also commonly caused by procidentia recti, polypi, fistulae, stricture, or trauma. Clotted blood is generally from hemorrhage in the intestine, but can be from retained blood of rectal hemorrhage.

PAIN

Pain is the most common symptom of rectal disease. It would be better for many patients who do not have pain, to have it. Nothing, not even hemorrhage, forces them so quickly to give themselves the care which is best for them, and which most people will not voluntarily give themselves, as does pain.

The pain of rectal disease may be of any character: acute or chronic; interrupted, paroxysmal, or continuous; local or reflected; mild or severe; or of brief or extended duration. It is most common at the anus and rectum, but may be prostatic, abdominal, sacral, coccygeal, or scrotal. Sciatic pains are commonly of rectal origin.

The sharp, knife-like pain of fissure is generally worse during defecation and gradually subsides afterwards. The pain of perianal abscess is accompanied by temperature, leucocytosis, and a definite, tender, hard, reddened, swollen area at the abscess. The pain of fistula is generally relieved by a flow of pus and there is a history of an old abscess, for fistula is the result of a neglected or unsuccessfully treated abscess. Pelvic or ischial abscesses give much the same symptoms as a perianal abscess but with a more pronounced systemic reaction. Polypi give a history of gradually increasing pain which generally becomes acute at stool, after the polyp has developed to sufficient size to come down with the stool and become locked outside by anal contraction. The pain persists until the polypus is returned.

Pain, or in fact all symptoms, may be entirely absent even after rectal diseases have advanced to a very marked degree.

TENDERNESS

Tenderness in the tissues surrounding the anus usually means abscess or fistula, but in the anus itself it is more likely to be fissure, ulcer, or cryptitis, although papilomata or polyposis may show some tenderness.

ITCHING

Although bleeding is the most important symptom and pain the most common symptom of anorectal disease, itching is often the most baffling, both from the standpoint of determining the etiology and from the standpoint of permanent relief of the complaint. It may occur not only with anal or rectal conditions, but is commonly due to constitutional diseases such as diabetes and uric acidosis. When the patient has both the local disease and one of these systemic diseases he nearly always has itching of the anus, perineum, scrotum, or all combined. The term "itching piles" is a misnomer and is not used by proctologists. Although some types of piles may contribute to the cause of itching, we can safely say that, of all the common causes of pruritis ani, piles are the least guilty. Patients will probably continue to use this term until far beyond our time, but the doctor should know better. This is the opinion of all proctologists whom I know.

The severity of the itching may vary from a slight feeling of uneasiness to the most severe at-

tacks. Nearly all forms are worse at night, although this is not always the case. Very pronounced cases may stop upon the curing of a fissure or anal ulcer. Proctitis is the most common cause and cases due to this condition show enlarged folds about the anus and the tissues have a wet "waterlogged" appearance.

PROTRUSIONS

More definite pre-examination conclusions can be made regarding the cause of anal protrusions than any other ano-rectal condition. Protrusion may be from hemorrhoids, prolapsis, polypi, hypertrophied papillae, and cancer. Questioning the patient regarding the nature of the protrusion, whether or not it is brought on at stool or whether straining is necessary to produce protrusion, whether protrusion returns following stool, can be returned manually or is irreducible, is all helpful. The common cause of protrusion is hemorrhoids. Membranous or internal hemorrhoids will, at first, generally return following stool. Later they may be slightly more difficult to reduce, while in old cases, or in cases where the sphincter is spastic or very flaccid, reduction is not so successful. If the hemorrhoids are of the venous or capillary type they are sometimes quite soft and return gradually and easily. The hypertrophied type of internal hemorrhoids is very often difficult to return or will not return even under force. The very common type known as interno-external or marginal hemorrhoids are often the product of former internal hemorrhoids, and years are generally necessary to produce them. I have removed these from patients who have had piles for over forty years. They cannot be reduced, are sore, sometimes bleed and because of the mucous exudation from the protruding membrane may cause some itching, though itching is a secondary complaint. These patients tell of the protrusion being sore, tender, and always moist. All such patients are "old timers" and any of them could write a book on "The Pile Cures That Pile Up But Seldom Cure." A sentinel pile is an enlargement which appears at the outer end of a fissure of the kind which has resulted from a broken-down and ulcerated Morgagnian crypt. This type of pile differs from the internal, external or interno-external. They are generally tender when the fissure exists but may be chronic and painless if the fissure heals.

Polypi, after they grow sufficiently, will come down when the bowels move and are locked outside when the sphincter contracts. They differ from other protrusions in that, when they are returned there is a characteristic snap as the stretched pedicle contracts and the polypus is released from the grasp of the sphincter muscles. Bleeding sometimes occurs in these cases. A protruding hypertrophied papilli gives the patient the feeling that a worm or some such thing is at the anus and he says he feels it moving or wiggling. These patients often have pruritis and may have some bleeding. There may also be some pain.

Prolapse of the rectal mucosa is commonly confused with hemorrhoids. It is difficult to make sure of the differentiation without local examination. Hemorrhoids are more nodular and there is a definite appearance of pressure or hypertrophy. Hemorrhoids are also less likely to show a protrusion which completely and smoothly surrounds the anus. Prolapse is smooth and velvety in character while with hemorrhoids the protruding mass generally shows one pile much larger than the others. Prolapse of the rectal mucosa which does not protrude is a common condition and is generally not diagnosed by the general practitioner. The extreme degrees of rectal prolapse in which all the coats of the rectum protrude is very easy to recognize. I shall not attempt to include venereal warts, chancre, and such less common conditions in this paper.

The difference between protrusions and elevations is plain excepting in the case of marginal hemorrhoids which often recede and leave skin tags or what are sometimes mistakenly called external piles. These are the result of stretching and hypertrophy of the skin during acute attacks of marginal interno-external hemorrhoids. A large skin tag is often the remains of a large sentinel pile which has subsided following the healing of an ulcerated fissure or crypt. None of these should be confused with external hemorrhoids.

External hemorrhoids should be included in elevations outside the anus and not as protrusions, although they may sometimes appear under the skin of the anal canal. An external hemorrhoid is a thrombotic pile and is covered with skin and not with mucous membrane. The injection of this type of pile or the interno-external or marginal type with phenol, quinine, urea, hydrochloride and other substances by doctors who have attempted to practice proctology without clinical instruction in this work have many times resulted in the near death of the doctor at the hands of the unhappy victim of the experiment. The injection treatment of some types of piles is wonderful in its results, but when the novice attempts to inject one of these skin-covered conditions he is anything but pleased with the consequences. These thrombotic external hemorrhoids are acute conditions. They come on suddenly and are generally very painful. They are even more sudden in their onset than perianal abscess.

Perianal abscess occurs in the same area as external hemorrhoids, but the patient is sicker, has temperature, leucocytosis, a red swollen area around the abscess and is not so physically active in his agony as the acute hemorrhoid patient. The abscess may be ischiorectal or, if neglected, the perianal abscess may become ischiorectal, rectal or fistula. Lipoma, condylomata and granulomata are chronic conditions and appear much as they would elsewhere in the body with the exception that they may cause mechanical irritation or may be combined with other conditions which might change their appearance.

External openings of fistulae generally have a papular appearance and sometimes are overlooked. If the fistula shows discharge the diagnosis is easy, but with a history exciting suspicion of fistula or the presence of one or more papules careful examination should be made.

Discharge of some kind is present in nearly every case of anorectal disease. Formerly it was the belief that internal hemorrhoids, because of local irritation, caused a mucous discharge. It is now believed by those practicing ambulant proctology that proctitis was present before the hemorrhoids were discovered. In any case, a mucous discharge will be seen in all cases of internal hemorrhoids be

they of the capillary, venous, or hypertrophied types, protruding, nonprotruding, reducible or not reducible. Mucous discharge is also present in the case of interno-external or marginal hemorrhoids, especially those that have become hypertrophied and have membranes exposed to irritation. All of these cases have more or less rectal prolapse, and rectal prolapse, in nearly all cases, is due to proctitis. The common presence of proctitis in all cases of internal and marginal hemorrhoids is a most important factor in proctology and the neglect of it is responsible for much therapeutic failure. Proctoscopic and sigmoidoscopic examinations tell at a glance whether or not inflammation or catarrh exists. Proctitis is the cause of nearly all of the pronounced cases of pruritis. Purulent discharge generally means fistula, but may come from ulcer, an infected crypt abscess, or malignancy. There is seldom any doubt about the pus from malignancy because of its characteristic and unbearable odor.

Anal fissure gives off an irritating serous discharge which clears up when the fissure is cured. This is a common cause of pruritis.

Another cause of discharge is infection of one or more of the crypts of Morgagni. These crypts in time break down either partly or completely, resulting in ulceration which gives off quite copious discharge causing irritation, itching, and sometimes much pain and soreness.

Constipation is just as frequently coexistent with anorectal disease as it is with other disease. The patient presenting himself to the proctologist with constipation as his chief complaint has, in most cases, been through the mill and failed to clear up under diet, spinal adjustment, and cathartics. The reciprocity of irritation between constipation and other rectal troubles is, with the exception of cases having diarrhea or dysentery, nearly always present. In my experience the most common local mechanical cause has been chronic spasticity of the muscles of the anal sphincter. These cases clear up like magic when the spasticity is corrected. There are many causes of constipation. Those cases due to mechanical obstructions might better be termed obstipation, a term coming more generally into use. The other causes of obstipation are coloptosis, prolapse, floating kidney, stricture, hypertrophied rectal valves, enlarged prostate, uterine displacements, adhesions, impactions. Constipation due to malignancy generally alternates with diarrhea. Most chronic cases of constipation have doctored from many angles and thorough rectal and x-ray examination should be followed until the cause is determined before treatment is started.

Diarrhea which has been of sufficient duration to bring an adult patient to the physician's office, especially if alternated with constipation, should be the indication of thorough rectal examination to rule out malignancy. This is again emphasized if the patient experiences no colic pains or cramps during the periods of diarrhea. Diarrhea during the summer months is common as a result of eating overripe fruits. Patients commonly say they have dysentery when blood is not present in the stools, so that the terms diarrhea and dysentery are commonly confused. Bleeding has been dealt with already; its importance should always be respected.

Stools vary in formation in most rectal diseases. Few rectal patients pass the normal large cartridge shaped stool. In spastic sphincter the stools are small and broken off into many small pieces. In rectal stricture the stools must be soft and, in many cases, even fluid. These cases will report that they never pass large stools. The ribbon shaped stool is also the result of mechanical obstruction, sometimes carcinoma of the sigmoid, sometimes a polyp, again hemorrhoids and occasionally stricture.

Pain and aching in the area of the sacrum is very often due to rectal disease. In women who have no pelvic female condition to account for the pain or ache the rectum and sigmoid should be examined. Almost any rectal disease is capable of causing pronounced symptoms in this area. In fact, fissure, ischiorectal abscess or hemorrhoids are commonly found to be the cause of sciatica, painful menstruation, shooting pains down the limbs, painful micturition, eneuresis, loss of appetite, headache, nausea, and a number of such symptoms. Anemia often results from bleeding hemorrhoids. General nervous irritability, sleeplessness and the like, not traceable to other causes, are repeatedly cleared up when rectal pathology is corrected.

Endocarditis and Murmurs*

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Owing to the increased number of persons dying from heart disease at this time, it is well to give this subject more than passing notice. There are cases coming to our offices continually, suffering from organic lesions of the heart, some mild, some grave. It becomes our duty as physicians to advise and treat these patients so that they may live and enjoy life, which they can, if they will live within the range of their hearts' possibility to function.

For us to be able to do this, it is necessary to know something of the causes underlying this trouble at the different periods of life.

CAUSE OUTSIDE THE HEART

Let it be known that all cases of acute endocarditis have their etiology outside of the heart. It is due to an infection or toxemia originating in some other part of the body. Just why one person out of probably ten, suffering with the same infection will have a severe endocarditis and the other nine have a very mild attack or possibly none at all, can only be explained upon the theory of the osteopathic lesion.

I realize that it is hard to distinguish between an acute and a sub-acute condition, as well as between an initial or recurrent attack, but if we will study the pathology for a few minutes it will help us to understand what is going on. In all acute conditions, whether initial or recurrent, we have soft vegetative areas on the surface of the endocardium. These may be small and single or they may be large and numerous. These vegetative growths frequently form polyps and in due time break loose from the endocardium and are carried

*Paper read at the Central States Meeting, Wichita, 1927.

in the blood stream until they reach a capillary that is too small to let them pass. Then you know what happens.

Some of these vegetative initial lesions ulcerate, even to the point of perforation of a valve, at which time we would get a murmur due to the blood regurgitating through this ulcerated foramen. And we can have all this going on in the heart without any apparent dilatation or hypertrophy.

DURATION

It is always interesting to know about the prognosis. An acute initial attack may last but a few days, and from that to a matter of ten months. The recurrent type depends of course on the amount of damage done at each time. A patient with this type may live for fifteen or twenty years.

MURMURS AND THEIR SIGNIFICANCE

The normal closing of the valves of the heart, with the reports incident thereto, are spoken of as normal heart sounds. Any variation of the normal, or any additional sounds relative to cardiac function are spoken of as murmurs. It is impossible to discuss the subject of murmurs independently of the subject of endocarditis, but as we have already discussed some of the features of that subject, we will not go into that further.

In order to determine the value of any particular murmur, it is necessary to time that murmur, determine whether it is a systolic, diastolic or presystolic, as well as to be able to determine the location in the cardiac area where the murmur is best heard. Then again, one must be able to determine if the murmur is functional or organic, and if organic, whether it is the valve or the ring that is most affected. The intensity and pitch of the murmur is also important.

The best method of arriving at the significance of any particular murmur is to first classify the particular cardiac condition causing it. Then we anticipate what we hear and can better place a value on it. Let it be remembered here and for all time that any and all damage to the valves and rings of the heart has its origin outside the heart. In other words, it is due to some infection or toxin in the blood stream circulating through the heart which causes inflammation or ulceration with resultant cicatrical contraction of the valves or rings. Take for instance the rheumatic heart, due wholly to a streptococcic infection occurring in childhood and youth. If on physical examination we find a systolic murmur (best heard at the apex leading to the axilla, or back), we would at once recognize some deformity in the mitral valve or ring. Should we hear in addition, a presystolic rolling murmur concluding with a sharp sound, we would know that we had not only a deformity in the mitral valve, but also stenosis of the mitral ring.

To confirm this last statement and to distinguish it from Flint's murmur, lay the flat of the hand over the region of the apex and you get a distinct thrill in mitral synosis but not in Flint's murmur. Suppose in addition to the systolic and presystolic murmurs just described, we hear also a distinct diastolic murmur (best heard at the second right intercostal space), and at the same time we note jumping carotids, a Corrigan and capillary pulse, all combined in the same individual; then what is the significance? It would certainly signify to anyone trained in scientific logic that we had an extension of the same streptococcic to the aortic valves, with damage either minor or severe. Should we find instead of a marked diastolic murmur, a systolic murmur heard distinctly at the second right interspace, noting at the same time a plateau pulse and distinct thrill over the base of the heart, it would certainly signify to the skilled cardiac examiner that the same streptococcic damage had extended to the aortic ring and that we were confronted with a combined lesion of both the mitral and aortic valves and rings. Damage to the aortic valve and ring in this instance is due entirely to attack of infection from the ventricular side of the valve.

We will take a hypothetical case of a young man, say 18 to 35 years of age, coming to us for an examination. He has never had any serious sickness but recently has had a breakdown and upon examination we find an aortic murmur, systolic in time, best heard over the manubrium, or we have a diastolic murmur, best heard at the second right interspace, and we have the apex beat displaced to the left and upon percussion we find the heart widened out. Certainly it would suggest a luetic lesion in the arch of the aorta, as well as damage to the aortic valves due to an attack of infection from the arch side and would suggest further tests including a Wasserman and x-ray.

Suppose we have a person of middle age, or even further advanced in years, with a history of hard mental work, more or less worry and sedentary habits, who has never known what it was to be sick, but who suddenly is "broken down," has "lost his pep." Physical examination reveals an indistinct diastolic murmur, best heard in the second right interspace. Now before trying to analyze this murmur let us visualize, if you will, the circulatory system and note what takes place as we grow older. Combined with all the toxemia incident to our modern ways of living, see the elasticity in the arterial system gradually diminish with the years, due to the elastic tissue being replaced with fibrous tissue.

With this diminished elasticity comes more strain on all chambers of the heart, especially the left ventricle, until finally in an effort to catch a car, make a sudden lift, or hurriedly climb the stairs he suddenly dilates the left ventricle and the aortic ring is dilated to where the valves fit imperfectly and we have regurgitation of the column of blood through the aortic ring. This occurs in diastole, consequently we would have a diastolic murmur best heard at the second right interspace. This murmur frequently replaces the second sound of the heart. With this imperfect closing of the valves and a dilated left ventricle, this regurgitated column of blood meets the blood coming from the left oracle, causing a murmur, best heard at the apex, presystolic in time, and known as the Flint murmur; this sort of a murmur, together with a history, as we have indicated, would suggest an arterial sclerotic heart.

There is one other type of murmur I want to note and that is the one heard over the base of

the heart and heard only in systole. It is the functional or hemic murmur found in all persons suffering from pernicious anemia, chlorosis or secondary anemia, or poisoned or weak heart muscle, due to some of the many infections or to medication. There is little significance attached to this murmur, except that it shows a weak muscle due to toxin or a poor quality of blood.

CONCLUSION

The significance of cardiac murmur depends upon the case history, physical findings and proper classifications of the individual case. The efficiency and performance of the heart depends far more upon the strength of the heart muscle than it does on a mere murmur; the intensity and pitch of the murmur gives a very good index as to the strength of the muscle.

The Function of the Appendices Epiploicae

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The appendices epiploicæ, situated along the median border of the colon and attached to the serosa, are peritoneal sacs filled with fat, containing an artery and vein for supply and absorption. They have, I believe, after considerable research, a two-fold function.

First, they act as a reservoir for undigested fat that might pass on from the small intestine and be further digested and absorbed by way of the capillaries in them.

Second, they supply fat, when needed, to act in the form of an emulsion to prevent a corrosion of the mucous membrane of the large intestine, especially in cases of sensitivity following taking of cathartics and drugs of various kinds; and also they have action in the form of a fat emulsion in cases of constipation, which function perhaps they cannot often fulfill, as the patient may have taken a cathartic before the appendices epiploicæ had time to act; or they may fail in this function in cases of constipation of a too severe type because as a result of too little fat being stored in the appendices epiploicæ there is not sufficient emulsion. This condition is found especially in cases of anemia. We meet many stubborn cases of constipation associated with anemia.

Briefly describing the important physiology of the large intestine in relation especially to fats; the material is soft and semi-liquid in the ascending colon, attaining the consistency of the feces in the distal end of the transverse colon. Many observers have laid particular stress upon a kind of movement which they designate as "mass peristalsis," that is, strong peristaltic movements which last only a few seconds but move the contents from one division to another and from the ascending to the transverse colon, etc. These movements occur only rarely, three to four times a day. Hirst connects them with the act of eating, assuming the existence of a gastrocolic reflex which is set into play by the entrance of food into the stomach. Therefore the mass peristalsis causes sudden displacements to move the food along the colon. In between, the contents are not moved except for the local agitation caused by the rhythmic contractions of haustral churning.

The fat which is acted upon by the pancreatic juice—and more specifically by the lipase, splits into glycerol and a fatty acid. I wish to lay emphasis here on Nature's method of sterilization. There is no doubt that glycerol is a good inhibitor of propagation of pathogenic bacteria. The theory that the colon bacillus prevents the presence or growth or pathogenicity of other organisms might be all right, but the colon bacillus itself becomes pathogenic in instances outside of the intestinal tract particularly. Perhaps the colon bacillus is always pathogenic and the glycerol prevents its action.

Since we know too little of the chemistry of the body, the seemingly useless organs or tissues are deserving of most careful study and analysis.

The fecal matter in the intestines at any one time is small compared to the great amount of food that is absorbed by way of the intestine. To my mind, drugs which may be absorbed by way of the intestine affect the work of the tract just as they affect the mucous membrane of the throat and mouth, if an inflammation with swelling results from swallowing drugs. The action of drugs upon the nervous system, which so admirably and diligently controls the workings of the great tract, is evident.

The alkalinity of the intestine together with the fatty acid and the glycerol make a wonderful saponification; wherefore constipation, etc.? Therefore it is our right to resort to enemas, particularly of the soapy type, in cases of too little fat of the intestinal tract, because we shall then adhere to the principles set forth by Nature, whose chemistry I have tried to describe according to our present-day knowledge of the subject.

Now, it is plain, that in all cases needing fat in the intestinal tract, the appendices epiploicæ send forth their share, directly perhaps or by way of saturation of the blood stream. It is small wonder that during acidity of the intestines diarrhea results, bringing in its wake emaciation and loss of subcutaneous fat in advanced cases. There is a total absence of fat in the appendices epiploicæ, particularly in children with summer diarrhea, where there is no parasite as a cause, but a food poison. These cases I have often seen at autopsy. We take care of our city reservoirs to protect our water supply, so also should we take care of the

reservoirs of our bodies—the intestines—to protect the supply of material we get from them.

The appendices epiploicæ are reservoirs of fat. Fat is needed for heat, heat is needed for energy, with energy we work. Have regard, therefore, for these reservoirs which, in the light of discovery years hence, perhaps will teach us our error in disregarding our waste products.

It is the writer's opinion that the fat which has been passed on into the large intestine is absorbed to a certain extent by the capillaries, but that a good part of it is stored in the appendices epiploicæ. All the information that we possess indicates that the mucous membrane of the small intestine absorbs readily, and it is one of the problems of this part of physiology to explain the means by which this absorption is effected. Anatomically, two paths are open to the products absorbed. They may enter the blood directly by passing into the capillaries of the villi, or they may enter the lacteals of the villi, pass into the lymph circulation and through the thoracic duct of the lymphatic system, eventually reaching the blood vascular system.

The older physiologists assumed that absorption took place exclusively through the central lacteals of the villi, and hence these vessels were described as the absorbents. We now know that the digested and resynthesized fats are absorbed mainly through the blood vessels, and therefore enter the portal system and pass through the liver before reaching the general circulation. I contend, therefore, that most of the fats should have been absorbed by way of the lacteals and that any considerable amount which may pass on to the large intestine cannot be absorbed to any great extent and must either pass out with the feces or be stored in the appendices. It is my belief that Nature has provided these epiploicæ for this very function, and that fat passes out in the feces in normal conditions only when the appendices epiploicæ have taken up all they can store.

If there is corrosion of the mucous membrane of the large intestine or if it is irritated by sodium fluoride, potassium arsenate, etc., the absorbing power of the cells is diminished; and because the amount of fat in such instance is not sufficient, the appendices epiploicæ send out their stored fat to counteract the action of the drug, producing at the same time a healing effect.

I have experimented along this line for some time, giving by mouth and rectum various drugs such as calomel, quinine, phenolphthalein, etc., and in all cases recovered a large amount of fat in the feces which was not as great before the experiment. This result encouraged me to investigate further, with this fact in mind, that the appendices epiploicæ give out fat in cases of constipation and so on, with the result that I have concluded it to be exact in so far as can be expected.

In cases of diabetes that have come to autopsy I have noticed the absence and atrophy of these appendices. Likewise in lead and other metallic poisoning, particularly in cases of carbon monoxid poisoning.

In various other types of infectious diseases that have come to autopsy, especially those of a wasting nature, the appendices epiploicæ have been found atrophied in the onset, and in many cases I have seen them entirely absent long before the patient showed any signs of wasting by loss of subcutaneous fat.

At present I am observing as much as possible for further information of a more confirmatory nature. It is my intention to continue along this line for the purpose of establishing the reason for Nature's creating the appendices epiploicæ and the vermiform appendix.

In conclusion I restate my report of research as follows:

1. That the appendices epiploicæ act as a reservoir for fat in the large intestine.
2. That fat is given off by the appendices epiploicæ in time of need to prevent a corrosion of the mucous membrane of the large intestine.
3. The fat from the appendices epiploicæ acts as an emulsion in cases of constipation to loosen the adherent fecal material.

Spinal Strains

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One of the most important osteopathic concepts that has grown out of my practice, covering twenty-five years, is the pathological results caused by strains resulting from improper positions of the spinal column.

A woman came to consult me about a goitre which had developed within two years. She was a tailoress in a department store where her work was to alter and fit cloaks, suits and dresses for the purchasing customers. Previous to taking up this work she had no trouble of this kind. The goitre was well developed and she complained of considerable choking sensation, especially when at her work.

Examination revealed a posterior position of the lumbar vertebrae, a flat mid-dorsal with decided contractures of the spinal muscles in the cervicodorsal region. While at work she sat at a table on which was placed the garment she was altering. She worked rapidly, sitting so that the spinal positions and conditions mentioned were accentuated. I realized, after studying the case, that the strains from her position were the chief causes of the trouble. The treatment given aimed at correcting the posterolumbar position, relieving cervicodorsal contractures and loosening all tissues of this region from vertebrae to clavicles. On beginning work in the morning she would feel very well but soon the choking sensation would begin. I told her to sit forward on chair and place feet back and throw top of hips and lower abdomen forward. She found that this position relieved the choking sensation.

Study of this patient and the results obtained emphasized to me the importance of anteroposterior positions of spinal vertebrae. I have never examined a case of goitre where there was a normal spine with the three natural curves, that is, a curve

forward at 3d and 4th lumbar, a posterior curve at middle and above mid-dorsal, and an anterior curve in the cervical region.

I would not overlook the fact that there are other factors helping to cause goitre. The absence of iodine in the water and vegetation of some localities has long been recognized as a factor. I believe most goitre localities are in hilly, mountainous regions. People walking over uneven ground and climbing hills neglect to preserve the three normal curves of the spine. It is easy and natural for most people to walk on level ground with lumbar curved forward, but not so in climbing hills. Roller skating has accounted for thyroid enlargement, becoming normal after the skating mania had passed.

I think it has long been accepted that there are the three curves in the normal spine, viz: anterolumbar, posterodorsal and anterocervical. I remember hearing this emphasized fifty years ago. If this position is properly taken, the top of the hips are forward and the lower abdomen slightly protrudes, the shoulders naturally hang backwards, the chest is in the natural position for deep, full breathing, and there is no strain anywhere in the spine, nor does it require any effort to maintain this position. The only direction necessary in assuming this position is to throw the top of the hips (crests of the illia) forward. This puts the curve forward in the lumbar, and the other two curves naturally follow. I tell my patients to throw the top of the hips forward and all other things will be added unto them. I most emphatically object to "hold the stomach in," "hold the chest up," "hold the shoulders back," and "hold the chin in." Each and every one of this quartet of directions is superfluous, abnormal, unnatural and harmful, if obeyed strictly.

I realize that I am in conflict with the teaching of many physical culture instructors. But any position that is a strain to maintain is abnormal and unnatural. Holding the stomach in constricts the abdomen so as to largely prevent abdominal breathing. There are no real curves in the spine. From the sacrum to the lower region the spine is nearly straight and from the lower dorsal to the occiput the spine is nearly straight. At the lower dorsal there is an obtuse angle instead of a curve. The chest is held up and the upper ribs and chest are distended into what we may call an emphysematous position. While in this position the lungs cannot be properly emptied, the lower ribs are lower than normal, and abdominal breathing is much curtailed. The body is not in a restful, natural position. If a patient with a spine of this shape displays a scoliosis in the lower dorsal region when sitting on the table, we may feel sure there is ptosed position of abdominal and pelvic organs. Women who, a few years ago, wore straight-front corsets were almost compelled to acquire this position. This is accounted for by the raising of the first ribs to more nearly a horizontal position, thus increasing the anteroposterior diameter of the upper opening of the thorax. This increased diameter gives more room for the vessels of the neck, so that the clavicles do not compress the thyroid veins against the arteries going to the upper extremities or other vessels of the neck. And the tissues and muscles of the cervicodorsal junction are not so strained.

In most goitre cases the right side is more enlarged than the left. This is caused by the right clavicle compressing the thyroid vein against the right subclavian artery. On the left side the left subclavian artery is not in the position to assist in the compression of the thyroid vein.

When the spine is nearly straight, the lumbar is a little posterior and the dorsal nearly flat or slightly anterior. In order to maintain an upright position the erector spinae muscles of the lumbar region must be at work, that is, in a condition of contraction. This pull or strain is communicated to muscles clear to the occiput. The dorsal region being reinforced and strengthened by the ribs can stand this strain. Therefore the effects of this strain are greatest at the cervicodorsal junction and there we find the tissues most effected by the strain. All the ribs droop in front, the sternum is lowered and the anteroposterior diameter of the upper opening of the thorax is lessened, causing compression of all the vessels of the neck.

As all the ribs droop in front, the sternum is lowered and the abdominal organs droop also. The spinal strain from occiput to lumbar gradually tells on the patient's vitality. Indigestion and constipation naturally follow.

Goitre will not usually develop even in cases having spines of this shape if the anteroposterior diameter of the upper openings of thorax is sufficient to prevent compression of the tubular vessels passing through it. For this reason, I believe, the principal cause of goitre is mechanical rather than chemical. As the strain at the cervicodorsal region results from the contracture of muscles at this point, there is a reflex irritation to the nerve centers of the spinal cord. This irritation affects the tissues of this segment and the thyroid gland is one of these tissues. All the supporting tissues of this segment seem to tighten and a choking sensation frequently prevails.

The common goitre, regarded from one standpoint, seems to be a physiological enlargement of the thyroid gland for the purpose of supplying the demand for more of the thyroid endocrin product. But the reason the gland is not able to provide the endocrin product in plenty is due, I believe, to some mechanical impediment, rather than to insufficient iodin in the water and vegetable food of the region. This is proved by the fact that osteopathic treatment will cure many cases of common goitre. If the osteopathic treatment, loosening the tissues and contractures of the cervicodorsal segments, is thorough and complete, and the spinal position and habits are corrected and remain corrected, we can generally depend on a cure being permanent.

Sometimes the common goitre becomes exophthalmic. This change in character of thyroid secretion is caused by the continuation of the irritation to the gland and perhaps, also, to the other surrounding tissues.

A man aged forty had been a patient of mine for fifteen years at irregular and infrequent intervals. He was a civil engineer. He was elected county engineer and his occupation in that office

was to drive a Ford car around the county and oversee the road work. While driving he sat on the lower sacrum instead of the ischia. The lower lumbar was decidedly posterior and the mid and upper dorsal were anterior or nearly straight. The cervicodorsal region seemed to have the greatest strain. A goitre began to develop and in two or three years became exophthalmic. He had been for treatment and I had warned him about this wrong position but my advice was not followed very persistently. Finally in January, 1924, he came for treatment feeling very nervous, complaining that he could not sleep. He was still ambitious, however, and asked if I thought he could pass a physical examination which he would have to take to get an appointment as a government engineer. The examination revealed a pulse of 120 when lying down, and the fine tremor characteristic of exophthalmia. I told him the condition he was in and explained the seriousness of it. I really tried to frighten him enough to impress him. In this I succeeded. He could remember his condition well enough to understand that his goitre did not start until after this position became habitual on account of his occupation. I showed him how to correct this position with a roll between his back and the back of the car seat.

I directed him to take this position at home and in the office, or anywhere else. The importance of this was impressed on him so that he followed directions. In January, 1925, he came to my office again. Examination showed that his pulse was 72, he had no tremor, could sleep all night, and was not at all nervous. Correct position, alone, had effected a real cure.

I believe that the strain at cervicodorsal junction may so irritate the nerve centers of that segment that the nerve impulses sent to the thyroid gland may so alter the biochemical nature of the thyroid secretion that it poisons the system and causes the symptoms of exophthalmic goitre.

We have a little rocking chair with the seat about four inches lower than the standard chair. The back is straight. My wife cannot sit in that chair over ten minutes without developing a pain in her stomach. She tells about her father having a low chair with a straight back in which he nearly always sat. He had stomach troubles for years but never discovered the relation between that chair and his stomach trouble.

For several years I practiced in Corning, N. Y., where hundreds of men were engaged in glass cutting. They sat on stools with their feet on a footrest, their elbows on a frame in front of the revolving grindstone, holding the glass on the stone. Their spines would nearly all be bent so the lumbar was posterior and fourth and seventh dorsal anterior. Many of them (I marveled that not all of them) had stomach trouble. Osteopathic treatment aiming to restore the three natural curves of the spine relieved every patient that came for treatment. We gave these patients instructions to follow and exercises to practice to overcome the evil effects of their occupations. It was not unusual for these patients to return after several months or a year to be treated again for stomach trouble. They had soon quit the exercises, and their occupations caused a return of the trouble. Perhaps, if patients followed our instructions closely, our incomes would suffer.

In conclusion, I emphasize a real osteopathic law in advocating that the three natural curves of the spine should be preserved. It is wrong to hold the stomach in, the chest up, the shoulders back, and the chin in. Simply hold the tops of the illia forward, then the shoulders hang backward, and there is natural ease and no strain to the natural spine. A posterolumbar is almost a universal accompaniment of a goitre.

Diseased Tonsils

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Before taking up the pathology or treatment of the diseased tonsil it will be necessary to give a brief survey of the histology of a normal tonsil. Too often we are just satisfied with looking into a throat and with a superficial examination advise for or against removal.

The tonsils are two glandular organs, situated one on each side of the fauces, between the anterior and posterior pillars of the soft palate. They are rounded in form, and vary in size considerably in different individuals. Externally the tonsil is in relation with the inner surface of the superior constrictor, beyond which are the internal carotid and ascending pharyngeal arteries. It is these arteries that are the dread of the reckless surgeon, however there is no excuse for cutting them if the tonsil including the capsule is carefully dissected away from the pillars before the snare is applied.

The inner surface of a normal tonsil presents from twelve to fifteen orifices leading into small recesses from which numerous follicles branch out into the substance of these glands. These follicles are lined by a continuance of the mucous membrane of the pharynx, covered with epithelium, their walls being formed by a layer of closed capsules imbedded in the submucous tissue. These capsules are similar to and perform the same function as Peyers glands in the intestine. They contain a thick grayish secretion. The blood and nerve supply to the tonsil are very important to the osteopathic diagnosis and treatment of the tonsil. The blood supply is the doralis lingual, a branch from the lingual artery, the ascending palatine and tonsillar from the facial and the ascending pharyngeal from the external carotid and the descending palatine, a branch of the internal maxillary. It is one of these small arteries that we usually cut when we have a so-called spurter with surgical removal. You will readily observe that the tonsil has a very complete and profuse blood supply which can be used to good advantage in helping to clean up an infection whether acute or chronic. On the other hand, if the tonsil is toxic the same blood supply will pick up these poisons and contribute to a systemic toxemia.

The direct nerve supply is derived from the fifth cranial and glossopharyngeal.

*Read before the Fox River Valley Osteopathic Association, Fond du Lac, February, 1927.

So much for the histology and anatomy of the tonsil, next we will consider the function of the tonsil.

Every authority I have ever read has a different opinion. Some say they absorb the products of the digestion in the mouth, some say they contain a digestive ferment, although they have never been able to demonstrate that fact. Some say they eliminate toxins taken from the blood stream from all over the body, others say they have an internal secretion. There are other theories that they have no function at all, that they protect the deep cervical tissue from bacterial invasion, but none of these theories have been substantiated by clinical or experimental evidence.

As I have already mentioned, they are lymphatics and the theory that they help in the blood formation is the most accepted one. From their histological structure such a function is possible. The tonsils are most active during the growing period and unless they are chronically hypertrophied they atrophy during adult life.

Now, having considered the histology and function of the tonsils we come to the consideration that is most important to the practitioner: when we should remove them and when we should not.

Because of this fact, just mentioned, that the tonsils are most active during the growing period, it is our duty to retain the tonsils in the child as long as we are certain that they are not affected in such a way as to endanger his general health. You will always find an abundance of lymphoid tissue in children because there is a rapid growth of all lymph nodules. You will seldom find pus in a child's tonsil, but will find that the causes of impairment of health are mechanical, such as adenoids, lesions in cervical and upper dorsal areas. However, contacts, repeated colds, wet feet, exposures, humidity in the home, etc., are not to be overlooked as common causes.

In adults pus is commonly found in tonsils and they are always a source of suspicion. In examining adult tonsils, begin at the nose. Look for polypi, serum infection, infection in nasopharynx, teeth, etc., as the lymphatic drainage from these areas is in such close proximity to the lymphoid tissue of the tonsil it may be the contributing cause to the tonsillar enlargement, or even infection, and correction will automatically clear up the tonsils.

To inspect the tonsils is not enough. By means of an aspirator we remove all secretions, mucus plugs and decayed food material from the crypts and examine it. Some physicians just push on the tonsil and if any type of material comes from one or more crypts they immediately advise surgery. Very often some of the lymphocytes will find their way through the epithelial walls into the crypts and are discharged as mucus plugs. These plugs are often mistaken for pus but if examined under a microscope will be found to be perfectly sterile and non-toxic to the patient. After we are sure this type of tonsil is sterile we aspirate, irrigate, treat with ultra-violet. Just a word here about the ultra-violet ray in its relation to tonsil technic. We use the water-cooled type with the regular tonsil applicator in all cases whether of simple hypertrophy or pus. In using ultra-violet it is most effective in an area of hyperemia. So in using our vacuum tube for aspiration we produce two effects: we clean out the crypts and produce this hyperemia. As we apply the quartz ray to the tonsil the shrinking and everting process starts, the ray sterilizes the surface and promotes reconstructive metabolism in the remaining tissues. These light waves are also absorbed into the blood stream, through the capillaries, bringing about the needed blood changes, as shown by blood tests. Eventually the tonsil becomes a hard, small, fibrous nodule, devoid of lymph tissue and cleaned of all infection, and the whole faucial region is clean and healthy.

Upon examination of tonsils you will find one of three types: The simple hypertrophied with mucous plugs in crypts, plugs sterile; the fibrous type with crypts ragged, form irregular and cicatrical, with or without pus—this is the surgical type and neither irrigation nor ultra-violet are effective; the simple enlarged tonsil with pus in crypts, the third and most common type. After ejecting the accumulation for diagnosis you can verify the pus by finding a strain of streptococcus, usually mixed with diplococcus. A microscopical diagnosis is most important in these cases. We are very careful to check all our cases. Just the bad odor, color and consistency of the accumulation is not always positively diagnostic. The blood findings are usually negative except for a mild eosinophilia in extreme toxic cases. Urinary findings are negative unless an occasional pus cell might be conformative. Analysis comes before any type of diagnosis in our office. After we are satisfied we have a simple pus case we treat it as we would any other abscess, proceed to clean it up, establish normal lymph drainage, blood supply and enervation.

We are taking cases of school children who have been examined by the health officer and sent home with a note notifying the parent to have the child's tonsils removed and we are giving them this osteopathic treatment and sending them back to the same doctor who pronounces them free from irritation. Medical men, even though they use these mechanical devices—the aspirator, ultra-violet ray, etc.—seldom get complete results. Osteopathic normalization is that part of the treatment which brings distinguishing results in all these cases.

Osteopathic work requires careful and painstaking concentration. The treatment each time should be directed toward correction of any cervical lesions that may be found. Thorough and continuous treatment should be given over the tonsils and glands externally. A downward, forward and sweeping motion over tonsils and glands is most effective. Drain the nasopharyngeal vascular system by paying attention to clavicles and upper ribs. Occasionally an internal treatment through the mouth to soft palate will be helpful. Always finish the treatment with patient on back and give the famous Miller lymphatic pump for three to five minutes. You will be surprised to see the lymph

nodules in the neck disappear and the tonsils return to normal.

By this method you have hastened drainage by taking the load off the lymphatics and made results permanent by osteopathically removing the cause. In other words, you will have given the blood stream a chance.

Passing of "Old Lady"

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One of the rabbits at Sunny Slope has outlived the usual lifetime of rabbits and, since she is of somewhat aristocratic lineage, has been called "Old Lady." Her history is of osteopathic interest.

She was one of a group of rabbits of fancy breeding stock and had taken at least one blue ribbon. The group was sold and was sent to the buyer by express. The crate in which they were shipped was dropped and the crate itself badly damaged. The rabbits did not seem to be hurt but the buyer refused to accept the rabbits on account of the accident and the express company sold them. Dr. Vollbrecht bought this one female hoping she might be used for breeding. At that time, July, 1919, she was said to be two years old. The family history could not be secured.

Examinations revealed lesions at the fourth and eleventh thoracic and third lumbar vertebrae. Dr. Vollbrecht tried to correct these lesions but found it impossible to secure permanent corrections. Before the treatments were given she did not become pregnant, but after partial correction of the lesions she did become pregnant and during the years 1920 and 1921 she bore young three times, three, four and three respectively. These were all subnormal and weakly, and showed the usual traits present in young rabbits born of mothers with upper lumbar lesions. Since it seemed impracticable to secure permanent correction of the lesions she was not again used for breeding. In September, 1924, she was put into the group kept under observation with especial reference to the occurrence of spontaneous cancers and other tumors. During this time her physical condition was never normal and the atony, low blood pressure and other symptoms of rabbits with these lesions were present.

During the winter of 1925-6 Dr. Homer N. Tweed attempted to relieve her manifest weakness by correcting the lesions. He was able to relieve the rigidity and tension of the spinal column very nicely, though permanent corrections seemed impossible under the circumstances. The treatments were such as might be given to any small and weakly human subject with the same lesions and they were repeated at intervals of two days, at first, to seven days, later. Twelve treatments in all were given to her, during a period of about two months. Permanent corrections were not secured, and, after so long a time, were not expected. The rigidity and the hypersensitiveness were considerably relieved and the general physical condition of the rabbit much improved by the treatments. She remained in fairly good condition after that time until within a few weeks of her death in March, 1927.

In April, 1926, Old Lady, with other rabbits, had her blood tested for fibrinolysis. While many other rabbits had blood which gave the usual fibrinolytic reactions found in human blood, Old Lady's blood showed no fibrinolysis at all. During the winter of 1926-1927, Dr. Laura Tweed made a careful study of the blood cells of the Old Lady, and a report of this study will be given by Dr. Tweed at a later date.

During the winter of 1926-7, Old Lady showed increasing weakness and other evidences of senility. Several times she seemed at the point of death but rallied again and again. In March, 1927, she did not rally for several days and it was feared that she might perish at a time when immediate autotopsy might be impossible. She was therefore permitted euthanasia by the ether route in that month. A very few whiffs was all that was required.

Autopsy was performed within a few minutes after her death. The fur was rough, eyes dull, teeth and claws long, as is usual in old rabbits, the lesions previously reported were recognizable before death, after death before autopsy, and after removal of the abdominal and thoracic viscera the position of bodies of the vertebrae showed the same lesions. The skin and flesh were very tough. Blood vessels were hardened and fibrous throughout the body. There were no evidences of recent trauma or acute disease.

The heart was enlarged to approximately one and one-half times the normal bulk. The cardiac walls were thin and the cardiac muscle weakened and atrophic. There were no pericardial adhesions but the pericardial fluid was increased to approximately five c.c. There was a peculiar aneurysmal sac at the apex of the heart; its walls were composed of two layers of thin connective tissue membrane, apparently the visceral pericardium and the endocardium, and it invaded the right ventricle, interventricular wall and the left ventricle, in order of space occupied. The cardiac vessels were engorged, tortuous and fibrous.

The lungs showed no perceptible change from normal. Pneumokoniosis was not more marked than in younger rabbits—which is very slight under the living conditions at Sunny Slope.

Spleen had a capsule thicker than in younger rabbits, and the thickening was irregular. Liver was mottled in color and of "hob-nail" appearance. On microscopic examination the liver showed atrophy of the cells and irregular hyperplasia of the connective tissue elements, such as are present in serious passive congestion of long standing in all mammals as they are in the human subject.

Gastro-intestinal tract showed some irregular hardening but no changes of interest.

Ovaries showed marked fibrosis. No doubt purely senile in nature.

Uterus is atrophic and fibrous, probably senile in nature, but in addition there is a tumor about 1x1½x¾ cm. in size, in the shape of a bean, lying within the right uterine horn. On micro-

scopic examination this tumor shows the structure of adenocarcinoma, with abundant and irregular karyokinesis, variable irregularities of cell structure and cell arrangement and rather marked reversionary characteristics. Connective tissue hyperplasia is abundant both within the tumor and in the adjacent uterine areas. There are several small roundish areas within the tumor itself which show spindle-shaped cells of connective tissue origin somewhat resembling sarcoma. No cystic areas are present. Small hemorrhages are abundant. The tumor extends both by direct invasion of adjacent tissues, and by way of the perivascular lymph spaces. Veins are invaded in several areas, and tumor cells are recognizable in the uterine veins at some distance from the tumor. No metastases are recognizable in lungs, liver or other viscera.

This case has been reported because the history of Old Lady resembles in many respects the history of human beings with lesions of similar origin. The improvement due to osteopathic treatments, even though permanent correction of the lesions was never secured, is of interest. Pregnancy and the birth of viable young followed such treatments during the years of early adult life. The young, while recognizably subnormal as rabbits, did not present any gross deformities. Human babies as nearly normal as the Old Lady's babies would not be considered really abnormal at all. In old age, at a time comparable to about the seventies or eighties of human life, the treatments which partly relieved the structural abnormalities of the spinal tissues were followed by marked relief of many symptoms supposed to be definitely senile in type, and there is no doubt in the minds of those who observed the course of events that Old Lady's life was prolonged and her comfort greatly increased as a result of the relief of the spinal rigidity and hypersensitiveness due to the treatments.

Elections, Selections and Appointments at Denver

Dr. G. V. Webster, New President — Kirksville Gets 1928 Convention

Unanimity marked two of the big events at the Denver Convention. The rules were temporarily suspended, and the new president and vice presidents were elected unanimously. When the next convention city was selected Des Moines, which had made a strong bid for the 1928 convention, withdrew in favor of Kirksville, which was chosen without opposition.

The following are all the elections, appointments, etc., received at the Central office up to time of going to press:

President—George V. Webster, Carthage, N. Y.
Past President—R. B. Gilmour, Sioux City, Iowa.
First Vice President—D. L. Clark, Denver, Colo.
Second Vice President—L. van H. Gerdine, Los Angeles, Calif.
Third Vice President—Margaret Brewington, Albuquerque, N. M.
Secretary-Treasurer—Cyrus J. Gaddis, Chicago.
Business Manager—Clayton N. Clark, Chicago.
Trustees—
R. H. Singleton, Cleveland, Ohio (re-elected).
George M. Laughlin, Kirksville, Mo.
A. D. Becker, Seattle, Wash.
E. C. Brann, Wichita, Kans.
Warren B. Davis, Long Beach, Calif.
Hubert Pocock, Toronto, Ont., Canada.

DEPARTMENT OF PUBLIC AFFAIRS

John A. MacDonald, Chairman, Boston, Mass. (re-elected)

Bureau of Industrial and Institutional Service—E. Clair Jones, Lancaster, Pa.
Bureau of Clinics—V. W. Purdy, Milwaukee, Wis.
Bureau of Philanthropy—Herman F. Goetz, St. Louis, Mo.
Bureau of Public Health and Education—Warren B. Davis, Long Beach, Calif.
Committee on National Affairs—C. B. Atzen, Omaha, Neb.
Committee on Osteopathic Exhibits—E. C. Brann, Wichita, Kans.
Committee on Osteopathic Exhibit in National Museum—Riley D. Moore, Washington, D. C.

DEPARTMENT OF PROFESSIONAL AFFAIRS

A. D. Becker, Chairman, Seattle, Wash.

Bureau of Professional Education—R. B. Gilmour, Sioux City, Ia.
Bureau of Hospitals—George M. Laughlin, Kirksville, Mo.
Bureau of Publications—J. M. Fraser, Evanston, Ill.
Committee of Censorship on Publications—John Deason, Chicago.
Committee on Books for Public Libraries—Percy H. Woodall, Birmingham, Ala.
Bureau of Censorship—Roberta Wimer-Ford, Seattle, Wash.
Committee on Credentials—Canada Wendell, Peoria, Ill.
Committee on Osteopathic Foundation—R. H. Singleton, Cleveland, Ohio.
Bureau of Colleges—D. L. Clark, Denver, Colo.
Committee of Professional Development—John E. Rogers, Oshkosh, Wis.
Bureau of Convention Program—Hubert Pocock, Chairman, Toronto, Ont., George M. Laughlin, Assistant Chairman, Kirksville, Mo.

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President—Hugh W. Conklin, Battle Creek, Mich.
Secretary—Fred Bischoff, Chicago, Ill.
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Give me liberty to know, to utter and to argue freely according to my conscience, above all other liberties.—Milton.

FUNDAMENTALS OF OSTEOPATHY*

The value of a generalization depends upon the number of particular problems it embraces.

In order to understand the reason for the apple falling to the ground or why water runs down hill, we must be familiar with the law of gravitation.

In fact, to really understand any problem, it is necessary to be familiar with the fundamental facts of nature that govern such phenomenon.

It therefore follows that to understand osteopathy, you must be familiar with osteopathic fundamentals.

What are osteopathic fundamentals? I consider the following are:

(1) Efficient function depends upon structural integrity of body mechanism.

(2) Structural integrity of body mechanism assures efficient, purposeful, self-preservative body-cell reaction to stimuli, be the stimulus chemical, physical, mental or environmental.

(3) When the skin and mucous membranes of the body are intact and in healthful state, the body mechanism has a natural protection against infections.

(4) Recovery from disease, including infections, depends upon efficient, self-preservative, body-cell reaction to stimuli.

These fundamentals are necessarily generalizations which need to be interpreted for the purpose of clarification. This we will attempt to do at least in part.

The application of these fundamentals of necessity depends upon the practitioner, and every individual practitioner is necessarily limited in his application of these fundamentals, dependent upon his understanding, his ability to interpret and his skill to apply them to the particular problem confronting him in the sick room, at the office or during emergencies.

Before attempting an interpretation of osteopathic fundamentals, which all have their root in mechanism, I desire to analyse the following question. Is the human body a mechanism? Yes, without a doubt. In fact, it is more than a mechanism. It is a vital adaptive mechanism which within certain limits makes internal adaptive reactions to environmental demands. But because of its anatomical construction, built up, as it is, out of mechanical units, the human body is to all intent and purpose a mechanism.

Further, because it depends upon power from outside sources—food, air and drink—transforms this potential chemical intake into an altered output; is subject to strain, breaks, dislocations, leaks, overloading, etc.; must be guided, cleansed and protected from harmful environmental contact; we are justified in our claim that the human body is a mechanism and therefore is governed by the same mechanical laws as are other mechanisms relative to functional efficiency.

Let us now take up each of these fundamental osteopathic generalizations separately, and give at least a fragmentary interpretation.

First: Does efficient function depend upon structural integrity of body mechanism? This seems an axiomatic truth. For the sake of clearness, permit me to present the same question in the reverse order. Is it possible for a structurally deranged mechanism to function with the same degree of efficiency as one structurally intact? This question would be answered in the negative by everyone familiar with mechanisms. No further argument seems necessary.

Second: Does structural integrity of body mechanism assure efficient, purposeful, self-preservative reactions to stimuli, be the stimulus chemical, physical, mental or environmental? Within the limits of the strength of the organism, it seems to do so. Let us take up each of these four phases of body-cell reaction to stimuli separately.

(a) Place chemicals in the form of food and drink in the mouth and we have at once a series of self-preservative reactions. The food is placed between the teeth, by the automatic action of the tongue, and is crushed by them. The salivary glands pour out their secretions which are mixed with the food bolus. The muscles of deglutition automatically place the food bolus in the pharynx, force it down the esophagus into the stomach. The digestive juices of the stomach are automatically mixed with the food, conveyed automatically into the small intestine by muscular action, then mixed with the bile from the liver, the enzymes from the pancreas and glands of the intestines, and as soon as the food is liquified, it passes automatically into the venous and lymph circulation by means of which it is transported to the liver, lungs, heart and through the general circulation to the body-cells. All of these and many more are self-preservative reactions on the part of the body-cells to chemical stimuli, and there is no need for outside assistance when structural integrity prevails within the body mechanism.

(b) Note the reaction to physical stimuli: If a weight be placed upon one shoulder we at once observe the automatic reaction of the body mechan-

*Delivered at the thirty-first annual convention A. O. A., Denver, 1927.

ism by changes in position of the trunk. Observe the self-preservative reaction to the stimulus of a blow, a prick of a pin, a swiftly approaching vehicle, a threatened collision, an unexpected contact with something hot or cold, etc., and we see clearly how purposeful and self-preservative the body mechanism reacts to physical stimuli.

(c) Does the body mechanism react in a purposeful and self-preservative manner to mental stimuli? In accordance with the state of mental development it does. Observe the mental struggles of the child in attempting to master his studies; the reaction to an insulting statement or a word of praise, to the call to dinner, or the obedient reaction to the word of command. In fact, our entire educational system is dependent upon body-cell reaction to stimuli. It is needless to go further to prove the point.

(d) Note the self-preservative reaction of the body mechanism to environmental stimuli. Observe the increased rate of heartbeat and respiration in response to elevation in altitude; the moistening of the skin by means of perspiration to reduce body temperature while working or during summer heat; the shiver reaction to cold; the avoidance of danger by fight or flight; the seeking of shelter from storm, rain or snow. All these examples should be sufficient to prove the point.

The foregoing analyses should prove conclusively that a structurally intact body mechanism will protect itself by means of efficient self-preservative body-cell reactions to stimuli, be the stimulus chemical, physical, mental or environmental. When, however, the body mechanism is structurally deranged its self-preservative reactions are less efficient, and failing in its responsive efforts permits of the entrance of discord in place of harmony in the body, ushering in disease. The fundamental cause for disease, therefore, is failure on the part of the body organism to react in an efficient self-preservative manner to the demands of the environment.

Third: Has the human body a natural protection against infections when the skin and mucous membrane is intact and in a healthful state? Upon investigation we find it has.

All that is necessary to prove this point is to study the usual method by means of which infections find entrance into the human body. The poison of yellow fever finds entrance through the sting of a certain species of mosquito. The sting of the tsetse fly introduces the trypanosome responsible for sleeping sickness. The plasmodium of malaria finds entrance into the body through the sting of the Anopheles mosquito. Tetanus finds entrance into the body through a puncture wound of the skin. Hydrophobia is transmitted by the bite of the dog or other animals, puncturing the skin. Streptococci or staphylococci and numerous other pathogenic micro-organisms find entrance into the body through the skin and mucous membrane where resistance has been lowered by injury, puncture, contusions, etc. None of these infecting organisms can enter the body excepting through some portal of entry where the skin or mucous membrane has been punctured or injured, or lowered in resistance by other means.

I think sufficient evidence is here presented to prove that the human body has natural protection against infections by means of a covering of healthy skin and mucous membrane.

Fourth: Does recovery from disease and infection depend upon efficient, self-preservative body-cell reaction to stimuli? That is without a doubt the case, for every form of treatment whether chemical, physical or mental, is dependent for results on this fact.

To illustrate: When the medical profession inject vaccines and preventive serums into the body, they rely on body-cell reaction to stimuli; for, the introduction of the pathogenic bacteria or their toxic by-products is surely not in itself preventive, but this foreign substance acts merely as the chemical stimulus which arouses appropriate self-preservative body-cell reactions, resulting in increased phagocytosis, also in speeding up the elaboration of anti-bodies or protective chemical compounds destructive to this foreign toxic substance. It is the self-preservative reaction on the part of the body-cells in response to the chemical stimulus of the foreign proteid and not the foreign proteid, that establishes immunity.

It is claimed by the medical profession that artificial immunity to infections is established by this process, but as each pathogenic bacteria requires the injection of a separate and distinct preventive serum, an endless process of hypodermic injections must be submitted to in order to establish immunity to the different varieties of pathogenic bacteria hurtful to the body.

If now for the sake of argument we admit that the process is a therapeutic success, it would still have rough sledding to gain general adoption, due to the natural abhorrence on the part of man to having his blood stream polluted with toxic material for the purpose of safeguarding against some remote possible danger that may never become actual. Such a process might be likened to the advice of amputating the toe to avoid the formation of a corn. The only way such a program may be put over is by means of compulsion, and such as is applied to the unfortunate recruit in the army or navy.

But, is immunity established in all cases by the injection of foreign toxic material? Experience does not corroborate this claim, nor does reason sustain it. There are a number of other factors besides the chemical reaction phase which influence immunization, such as exposure, overwork, unsanitary conditions, excess physical and mental strain and other such predisposing causes to disease, but above all others, structural or anatomical irregularities of body mechanism which reduce functional efficiency. All of these enter into the problem of

immunity. The medical practitioner, however, tries to teach mankind to rely wholly on the toxic injection theory and slights more or less all these other important factors.

Here is a field rich in potential possibilities for our school of practice, in teaching mankind that in accordance with what is now known relative to the establishment of immunity in man, the safest course to follow in protecting the body against infections is to destroy dangerous insect life by sanitary means, keeping the skin and mucous membrane of the body in a healthful state, avoiding as much as possible the formation of other predisposing causes and by seeing to it that the body mechanism is kept structurally intact. The future may reveal other methods which are safe and sane that will supplement these tried and proven safeguards.

RECOVERY FROM DISEASE AND INFECTION

The physician, however, deals more particularly with the case when disease or infection is already present, for as yet only a small minority are willing to spend time and money as a safeguard against illness.

But, the injecting of preventative vaccines or serums is certainly no longer indicated when disease or infection is present in the body, for in this condition we already have abundant toxic material present in the body, which is stimulating the self-preservative body-cell reactions to the full limit of body-cell capacity; and to inject more toxic material into the body in such a condition, with the object of arousing still more vigorous body-cell reactions, is certainly not sound logic.

What is indicated at this stage is direct physical aid to the sick, struggling body by relaxing tense muscles, freeing the channels of circulation and lessening the load on the heart, speeding up elimination, reducing nerve irritation, breaking up vicious reflexes, inspiring hope and confidence in the mind by means of personal contact, etc., all of which lessens the load on the sick body, reduces pain, induces sleep and assists in restoring efficient self-preservative body-cell reactions, thereby aiding recovery.

But in addition to this direct physical aid to the soft tissues of the body, the osteopathic physician is specifically trained to search for and correct bony-ligamentous lesions, particularly of the spine, so as to restore structural integrity to the body mechanism, and by so doing bring back functional efficiency.

OSTEOPATHIC SYSTEM COMPLETE

Is the osteopathic system of practice suitable to meet every emergency of the general practitioner? I believe that it is. My personal opinion is that the osteopathic system of practice can be made to adequately fulfill all of the requirements of the general practitioner. This conclusion is based upon the following reason:

The generalization fundamental to osteopathic practice is broader and deeper than the generalization fundamental to the drug system and when more fully developed will be adequate for all emergencies —chemical, physical, mental, environmental.

To illustrate: The generalization fundamental to the drug system is that chemistry is supreme in the body mechanism and that the physical and psychological processes of life are dependent upon body-cell chemistry. The administration of chemicals as a therapeutic measure is the logical application of this viewpoint.

The generalization fundamental to the osteopathic system is that the body mechanism is a center of nature, through which the chemical, physical, mental and environmental forces of life must operate free and unobstructed to assure health. Structural defects in this center will cause faulty functioning. Correction of these structural defects is the most direct means of restoring efficient function, and this fact applies to prevention just the same as it does to cure. Therefore, corrective therapy to remove the structural defects in the body mechanism is the logical application of this viewpoint.

When these two generalizations are carefully interpreted it should be clear that the generalization fundamental to the osteopathic system is broader and deeper than the generalization fundamental to the drug system.

Conclusions drawn from this analysis of fundamentals should make it clear that the osteopathic system, when completely developed, is amply adequate for every emergency.

INDIVIDUAL IS LIMITED

But it is quite a different problem when the analysis is applied to the individual practitioner. Here limitations must be recognized and conceded in every case, for the efficiency of the individual is not co-extensive with the system, but is circumscribed by the individual's understanding, his ability to interpret, and his skill in applying osteopathic fundamentals to the particular problems confronting him in the sick room, at the office or in emergencies.

The limitations which hamper us are individual and not due to the system. Confusion in application of principles arises by reason of the fact that the most of us are not clear on fundamentals. The difficulties we experience in applying the osteopathic system to particular problems may be assigned to several causes, namely, inadequate practical experience, a restricted field of practice due to hampering legislative restrictions obstructing growth, environmental discouragement due to ignorant or malicious carping critics, the study of too much pro-medical literature and addresses, the youth of our profession, lack of confidence by practitioners of osteopathy in the system, and most of all, lack of application to purposeful, constructive thinking. These and many others are the difficulties retarding the growth and development of our profession.

Further, lack of enthusiasm and vision, and unwillingness to sacrifice for the good of the cause

on the part of many of our members, also greatly hamper our development. The success of our system of practice must come out of the labors of the rank and file of our practitioners. It can rise no higher in public esteem than is warranted by our professional labors. Osteopathic practitioners themselves must feel the responsibility of putting osteopathy over to the public. The public has no source by which osteopathy may be fairly judged other than by the practitioners of osteopathy, individually or collectively. Keeping this thought in mind may help to clear the vision, stimulate loyalty to the cause, speed up progress, and help in establishing a better spirit of good-will, cooperation and unification among the members of the profession.

RECAPITULATION

To practice osteopathy intelligently and successfully we must be familiar with osteopathic fundamentals.

Recovery from disease, including infections, depends upon efficient self-preservative body-cell reactions to stimuli.

The system of osteopathy when fully developed is adequate to meet every emergency of the healing art, be the emergency chemical, physical, mental or environmental.

The osteopathic practitioner is limited in his practice only by the measure of his understanding, his ability to interpret and his skill to apply osteopathic fundamentals, in the sick room, at the office or during emergencies.

Properly understood, the end and aim of the osteopathic physician is to convince the public of the efficiency of our healing system. This could be done for a span by boosting and from advertising. The advantage would be only temporary and the reaction a distinct loss.

Political advantage must never be sought. Activity in this direction should be confined solely to insuring a fair field.

Temporary expedients of all kinds must be regarded only as a makeshift. We must have vision, not for today or tomorrow, but to the fulfillment of the dream of our founder, when the foundational principles of osteopathy will be accepted by the public as fixed and determinative as the laws of mathematics.

To accomplish this the individual practitioner, in the solitude of study, must become so imbued with the knowledge of the truth he proclaims that his proclamation will have the fire of conviction.

In his daily life he must never forget that he carries in his person the fortunes of the cause for good or for ill, and that if he fails to live up to his highest ideals he is betraying not alone himself but the cause to which he owes allegiance.

In his professional service he must remember that each case successfully handled becomes a point of endless radiation for the upbuilding of the profession, and this should and will incite him to the utmost of painstaking effort in every case, even though measured in money the reward may be small, but measured in the joy of accomplishment he will have an ever-increasing harvest as the years gather about him.

To put the practice of our profession over to the public, then, depends wholly upon the character of our professional service; nothing else will ever convince the public. May we never forget this fact.

C. B. ATZEN.

OVERCOMING LIMITATIONS*

As we review the history of osteopathic legislation in the various states during the past thirty years, one general mistake stands out very prominently. Osteopathy has been defined by its ardent supporters within too narrow limits, with too little vision of the possibilities of its development into the splendid system it has now become.

This repeated mistake has resulted in many a fight to obtain privileges under the law. In other words, in their haste to legally define a rapidly growing system of therapy, those who had its best interests at heart unwittingly placed barriers in the path of development.

Few of us question the efficacy of the use of surgery, light and heat therapy, some intestinal lubricants and many other means of alleviating human suffering, without the least detriment to the patient or retardation of his progress. At one time or another, since 1874, any or all of these measures would have been denounced.

The lesson from this to us today seems to be that we should carefully avoid the denunciation of any particular method or system of healing. In the years to come our own viewpoints will undoubtedly change, or those osteopaths who follow us and combine our experiences with their own may be fully justified in making their own additions to or deductions from the system of osteopathic therapy as we know it.

On one ideal we might all agree, that is, that osteopathy stands for the diagnosis of disease from the viewpoint of physical function or malfunction, and likewise we should have the treatment upon the specific manipulative adjustment of lesioned tissue, aided by any generally accepted and scientifically proved means of alleviating human ills, wherever indicated, and regardless of whether other schools of practice produced such methods or whether we may claim originality.

This is the broad middle of the road, where we can stand without apology. Such an ideal might well promote the broadest and most liberal support of the members of our profession, thus strengthening our all-important solidarity.

Such a stand on our part precludes the possibility of our indulging in the criticism of anyone inside our own organization. Neither would we cast aspersions on the beliefs of other organizations

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than our own. Such a policy would draw less fire from our enemies, and with fewer obstacles in our path, together with a common purpose for all of us, we should put osteopathy over the final top and launch it on a plane where it should command the respect of every open-minded and fairly disposed layman in the land.

IRVING D. EWART.

ANTERIOR POLIOMYELITIS NOTES

A writer recently said that in the ages before Newton's time many men had lain under apple trees and felt apples bounce off their heads without feeling so much as a flicker of curiosity. This set me to wondering whether many valuable observations were not made and lost through dread of the hollow laughter with which original ideas are often greeted on their initial step into publicity. But I, being a hardened sinner, shall go ahead with my supposition about poliomyelitis.

For several years quite a number of cases of infantile paralysis developed in the section of country surrounding the town in which I practice. The town was at that time one of above ten thousand persons. It was soon noticed that all the cases developed among country people or people who lived in small villages or hamlets. It was rare to find a case coming from a town of even a few thousand inhabitants.

The poliomyelitis virus has been found to be transmissible, but how it is carried and what is the reservoir of virus is undetermined.

The manner of transmission of epidemic poliomyelitis cannot be regarded as definitely determined. The fact that the virus is present in the secretions of the nose and throat of children suffering from poliomyelitis induces some investigators to believe that the infection was transmitted directly from person to person by means of contact. Many cases of the disease, however, have been observed under conditions where no connection whatever with a previous case could be traced. The existence of healthy carriers of poliomyelitis virus may perhaps explain the occurrence of such cases.[1]

Jordan further states that many facts indicate that insects, such as house flies and biting stable flies, may transmit the disease. Again quoting Jordan:

The disease prevails under rural rather than urban conditions, and apparently shows no tendency to spread in congested city districts where many diseases due to contact are excessively prevalent. . . . The occurrence in certain of the lower animals, as horses and dogs, of paralytic affections with symptoms like those of poliomyelitis has led a number of observers to suspect that infantile paralysis might be communicated to man from these animals. . . . It has never been definitely shown, however, that any of the lower animals suffer naturally from a disease which is actually identical with poliomyelitis. . . . Guinea pigs, mice and pigeons fed with intestinal contents from typical cases of infantile paralysis gave negative results. Rabbits, on the other hand, can be fatally infected. Stitt's "Practical Bacteriology, Blood Work and Parasitology" affirms in discussing the poliomyelitis virus, "With the possible exception of the rabbit only men and the monkey are susceptible."

Most bacteriologists advise a culture medium of ascitic fluid and a portion of sterile rabbit kidney.

[1]Jordan's General Bacteriology.

During the period of the poliomyelitis epidemic, flies existed to a considerable extent in town as well as country, sanitary arrangements being poor, so that if human carriers were the reservoirs of virus the town flies had many more opportunities to carry infection than the country insects, yet all of the infection occurred in the country. Evidently either a special carrier or a special reservoir of virus must have existed which did not exist in town. About that time, while hunting, I came across a jack rabbit which was paralyzed and dragging its hindquarters. Aside from this handicap it seemed lively enough. I caught the rabbit and found no signs of violence on its body, concluding therefore that it had the same form of paralysis found in poliomyelitis. Other hunters and ranchmen have told me that they have often observed the same form of paralysis in rabbits. A ranchman told me that he had observed that rabbits increased in numbers for several years until they became a serious pest, when some epidemic would suddenly strike them and kill nearly all of them within a short time.

My deductions from these observations lead me to conjecture that the various species of hares and rabbits constitute the permanent reservoir of poliomyelitis virus and that this disease is transmitted either to the milk bottles, food and mucous membranes of children from the mucous membranes or excreta of the rabbit by common house flies or by the agency of the bite of cattle flies which have first fed on rabbits.

I believe there are enough facts at hand to warrant a thorough investigation by those of our scientists who have access to complete laboratory equipments.

CYRUS N. RAY.

AN OLD TEXT, A NEW SERMON

The increased space devoted to State and Divisional News in this issue is partly due to the fact that some of our State secretaries took the trouble to send us special reports of conventions, emphasizing the salient features of the proceedings. Another secretary took the trouble, at the close of the convention, to mail newspaper clippings giving details, which otherwise would not have reached us for some time, probably too late for insertion this month.

This gives us an opportunity to preach a new sermon from an old text, "Wanted, News Direct."

Again we appeal to secretaries of divisonal organizations, also publicity chairmen and others who furnish news of professional activities, to send us news direct. Just a copy of a program, with a penciled note about the attendance or some other feature of the meeting, is better than a newspaper clipping from an agency arriving days or weeks later. Or if secretaries would clip the news items from their local papers and send them to us, a task involving little trouble, we would have a chance to publish state and divisional news earlier. News sent direct would be more accurate and complete, too. The brief newspaper reports frequently overstate or understate points of importance, while minor slips in names, etc., are inevitable.

So we would urge every secretary of an osteopathic organization to regard himself or herself as a correspondent for the A. O. A., keeping us posted about professional happenings, thus helping us to make our news columns more prompt, accurate and complete.

C. H. M.

Department of Professional Affairs

Carl P. McConnell, Chairman

HOSPITALS AND SANITARIUMS

W. CURTIS BRIGHAM, Chairman
600 Edwards-Wiley Bldg.
Los Angeles

CHARTER GRANTED AT LANCASTER, PA.

A charter has been granted to the Lancaster Osteopathic Hospital Association, the object of which is to establish, equip, maintain and support an osteopathic hospital. The application was signed by W. A. Sherwood, Nellie V. McGraw, E. Clair Jones, Alice M. Swift, Bertha M. Hupper, Carrie M. Evans and Minnie E. Mutschler.

$50,000 HOSPITAL FOR LARNED, KANS.

Dr. B. L. Gleason, Larned, Kans., reports the Larned *Chronoscope*, has placed the general contract for the erection of his new hospital, at the southwest corner of Sixth and Main Streets. The general contract, awarded to Shuss and Henderson, was for $31,000. The heating, lighting and plumbing contracts will be awarded later. The total cost of the building, including equipment, will be about $50,000.

The main building will be 38x68 feet. It will be three stories high, built of brick, with concrete floors and of fireproof construction throughout. There will be 36 rooms. Work will commence at once, as it is planned to have the building completed in December. The architect is Charles Shaver of Salina.

NEW HOSPITAL FOR PORTLAND, ORE.

At the annual convention of the Oregon Osteopathic Association, held at Portland in June, it is reported that announcement was made of a new Portland General Osteopathic Hospital, the first unit of which is to be erected probably during the next year, at a cost of $100,000. Plans have been completed for the structure, which is to be modern in every detail. Several locations are being considered.

Department of Public Affairs

JOHN A. MacDONALD, D.O., Chairman
160 Newberry St., Boston

BUREAU OF CLINICS

VICTOR W. PURDY, Chairman
725 Caswell Bldg., Milwaukee

SOME INTERESTING VIEWS

(Received in response to our request made in the July issue.)

THE REASON FOR A CLINIC

New Jersey. It must be founded upon a desire for knowledge and a sincere purpose to do good.

California. The clinic was established for the purpose of putting within the reach of those unable to pay a doctor's fee the opportunity to become efficient units of society, to insure the proper physical foundation for the child, and to educate the people osteopathically.

VALUE AS A DISSEMINATOR OF THE OSTEOPATHIC CONCEPT

Chicago. Clinic work with children has been far-reaching and great good has been done in a general way to broaden the osteopathic concept.

Pennsylvania. Clinic started five years ago is already a fine success, doing great good and operating strongly for the cause of osteopathy as a science.

Michigan. The clinic is a wonderful means of educating parents to osteopathy in a section where osteopathy was previously known as massage from the weaklings of yesterday.

Illinois. The clinic is very definitely worth while if it is properly conducted.

Massachusetts. Our greatest achievement has been the education of parents to the fact that we can accomplish so much when we get a chance to do something for the young children.

Louisiana. Do not form a clinic unless upon sound foundations:

1st. A suitable location.

2nd. Sufficient assistants to do the work.

3rd. Scrupulously guard against imposition.

To prevent the evil of "imposition," emphatically insist that the applicant bring a letter from a school principal or a minister, stating that they are absolutely unable to pay for service.

California. There can in the very nature of things be no set plan for development of clinics. They are very human things and therefore variable.

LAY ORGANIZATION

Pennsylvania. The osteopaths were organized into a city society, and a meeting was held with prominent lay patients and others interested in osteopathy. A lay organization was formed and they elected their own officers. They collect the funds and manage the business side generally, secure quarters for us and provide a secretary.

Ohio. We have organized the Woman's Osteopathic Club composed of about one hundred laywomen, including the wives of osteopaths. One of the chief aims of the club is to raise money to establish a clinic, which they will take all responsibility of maintaining.

DIFFERENT OPINIONS ON ESTABLISHING A CLINIC

Massachusetts. The clinic should be established as an independent enterprise and not be connected with some church or charitable institution; the clinic should be well formed before it is opened; the physicians in charge should be prompt in their attendance; the clinic should be equipped so that any type of case may be treated intelligently and complete records should be kept. Its value as a disseminator of osteopathic concepts lies in its ability to treat and care for every type of disease, not only in the clinic but in the home.

District of Columbia. A clinic is one of the best methods of spreading the gospel of osteopathy that we have. People think more of the profession if we are willing to give of our time and knowledge for the good of others. A clinic should always be directed by some organization outside of the profession, unless it is in some osteopathic hospital. Start it as an adjunct to activities of a church or some civic organization. The more the community has an interest and pride in it the better.

SOME DIFFICULTIES

Colorado. The principal difficulty is to get our men to persistently give their support and to see the necessity of a complete examination.

Missouri. It is very difficult to get doctors to leave their offices and go to clinic quarters at the hours designated.

It is difficult to conduct a clinic successfully without financial support from the public in one form or another.

COOPERATION

Chicago. Through the cooperation of school teachers who are interested in our work, we have several clinic patients each Saturday morning.

VALUE TO THE DOCTOR

Colorado. All interesting cases are discussed at regular staff meetings.

EQUIPMENT

New Jersey. Proper equipment should be provided so that a case can be thoroughly examined before any osteopathic treatment is given.

PUBLICITY

New Jersey. Newspaper publicity, of a legitimate nature, is the one big thing which helps to make the clinic a success. A haphazard clinic, for publicity purposes only, will not last.

Louisiana. If you are starting a clinic with the object of disseminating osteopathy, it would be like "hiding your light under a bushel" unless you get publicity. To get the newspapers interested is to be really in earnest about

giving real service and not for promotion of selfish interests.

THE FAR-REACHING EFFECTS

Illinois. The young men who took clinic treatment years ago are filling responsible places in life, and one is taking the course in osteopathy, having become interested in the treatments he received when a lad.

RESULTS OF NORMAL SPINE WEEK

Nebraska. Two troops of Boy Scouts were examined. I can still see the good effects this had on the boys in bringing them to me for attention, both in illness and accidents as well as in their first aid work.

Maine. Had been in practice only three and one-half months. Normal Spine Week was my best week financially and it helped me as well as osteopathy to get before the public.

VICTOR W. PURDY.

COLORADO

Dr. H. E. Peckham, Estes Park, announces the opening of an osteopathic clinic for children under the age of fifteen. The clinic will be open until September 15.

CLINIC AT ILLINOIS STATE FAIR

Encouraged by the success of the clinic a year ago, the Illinois Osteopathic Association is holding a clinic at the State Fair at Springfield, August 22-27. Dr. Jenette H. Bolles, of Denver, will be in charge. About fifty children will be examined each day, according to a prearranged schedule. Children with acute diseases will not be treated, the aim being to examine only those children with congenital deformities or chronic maladies.

A CLINIC FOR EVANSTON, ILL.

The committee on clinics and hospitals of the North Shore Osteopathic Society, Dr. D. D. Waitley, chairman, met on Friday, July 15, and made definite plans for the establishment in Evanston of a clinic for children 12 years old and under. It is hoped to have a clinic running by the beginning of October, probably two days a week.

The work of the committee is distributed as follows: Finance, Dr. Hal W. Shain; records, Dr. Geisse; equipment, Dr. R. Reder; location, Dr. J. M. Fraser; lay committee, Dr. Katherine M. Lomas.

Dr. Waitley reports that prospects for the clinic are most encouraging, the press having devoted generous space to reports and several leading citizens showing keen interest in the project.

BUREAU OF INDUSTRIAL AND INSTITUTIONAL SERVICE

W. OTHUR HILLERY, Chairman
220 Bloor St. W., Toronto, Canada

Dr. C. L. Larson, River Falls, Wis., has been elected physician for the Fraternal Order of Eagles, Stillwater Lodge, the River Falls Journal reports.

Dr. L. M. Shea, Hollywood, Fla., has been appointed a member of the City of Hollywood Board of Health, which has five members.

State Boards

COLORADO

Dr. D. L. Clark, Denver, Colo., was reappointed president of the Colorado State Medical Board at their July meeting.

FLORIDA

Governor Martin has appointed Drs. Julia Larmoyeaux Kline and A. G. Chappell of Jacksonville, and Lamar K. Tuttle of Miami, members of the State Board of Osteopathic Examiners.

IOWA

Dr. H. J. Marshall, Des Moines, has been reappointed a member of the State Board of Osteopathic Examiners, it is reported, for a term of three years, beginning July 1.

KANSAS

Dr. P. W. Gibson, Winfield, has been reappointed for a four-year term as a member of the Kansas Osteopathic State Board of Examination and Registration. Dr. Gibson has served on the Board for eight years, two years as president and six as treasurer.

MINNESOTA

Dr. Arthur E. Allen, Minneapolis, has been appointed by Governor Christiansen to serve on the Basic Science Board of Examiners, while Dr. A. F. Hulting, Minneapolis, has been appointed by the Governor to take Dr. Allen's place on the Minnesota State Board of Osteopathic Examiners.

MONTANA

Governor Erickson has reappointed Dr. Asa Willard a member of the State Board of Osteopathic Examiners, for the term ending May 13, 1931.

NORTH CAROLINA

Dr. F. C. Sharp, High Point, has been reappointed by Governor McLean to the North Carolina State Board of Osteopathic Examination and Registration, for a term of five years.

NORTH DAKOTA

Governor Sorlie, it is reported, has appointed Dr. D. E. Hodge, Grand Forks, member of the State Board of Osteopathic Examiners.

TENNESSEE

At their recent meeting in Nashville the State Board elected the following officers: President, Dr. John H. Harrison, Memphis; secretary, Dr. E. C. Ray, Nashville; treasurer, Dr. O. Y. Yowell, Chattanooga. The other members of the Board are: Dr. R. L. Park, Trenton; Dr. Fred Dowson, Jackson.

UTAH

The new State Board of Osteopathic Examiners is as follows: Dr. R. H. Prindle, Ogden; Dr. Mary Gamble, Salt Lake City; Dr. B. W. Clayton, Salt Lake City.

Technic

THE ABNORMAL PHYSIOLOGY OF A LESION

IRVING D. EWART, D.O.
Albany, Ga.

We ordinarily think of a bony lesion as accompanied by fixation of the joint. This is doubtless true if the word "fixation," as used, has a relative meaning, but we doubt the absolute fixation of an articulation as we ordinarily find it in practice. We would rather believe that the accompanying rigidity of the tissue about the joint results in restricted motion; also that the rigidity is not equal in all the tissue about the articulation.

It seems logical that a joint surrounded by tissue of unequal tone, as we often find these chronically lesioned articulations to be, should function abnormally and with an abnormal axis of rotation. We cannot believe them to be actually fixed and immobile. If this were true we should expect to find ankylosis much more often in the chronic lesions which we recognize as of long standing.

If that be so, the joint motion must be abnormal, occurring about an axis of rotation lying outside the normal axis of rotation. It seems that this would result in restricted action on the side of the greater contraction of tissue while there should be relatively freer movement on the side of the joint where there is the least contraction.

If we think of the muscular and ligamentous tissue on one side as becoming a strap, non-elastic and taut, we might imagine the condition that quite possibly exists in such a lesioned joint. Motion would be largely governed by that strap and any motion, potential or actual, would occur about an axis parallel to and near that strap and not about the normal center of motion of the joint.

If this idea of joint movement is correct, it seems entirely possible to merely "get motion" in a lesion, and yet, not do more than forcibly move it about that abnormal axis. That, we believe, is precisely what we often do when, without relaxation, we "pop" a joint to correct a lesion. In an acute case of more or less recent origin such a method seems to quickly reduce the congestion about the joint but in our cases of old, chronic osteopathic or bony lesions we have found that they yield sooner and with fewer office treatments when we are thorough in our relaxing work in all the tissue about the joint, not that

of the superficial aspect alone but the deepest tissues all about the joint as well.

We believe that the first step in the correction of such a chronic lesion should be the re-toning of the tissue. This seems accomplished best by stretching and relaxing to as complete a state of relaxation as is possible. Follow this with a careful correction or adjustment of the bony tissue of the joint, then keep it at rest as much as possible to promote the normal toning of the tissue.

To do this we stretch equally and normally all the fibres about the whole 360 degrees of the circumference of the articulation. We do this slowly enough to permit the complete relaxation of all the fibres. Hurried movements only stimulate the contraction of tissue for protection, while a slow, steady, gentle, stretching strain will relax it.

The following suggests the manner in which we prefer to relax the tissue before correcting a sacro-iliac lesion:

Placing the patient on his back, left leg fully extended, we raise and flex the right knee over the abdomen. Then grasping the right thigh between our own right forearm and side, right hand grasping patient's thigh, we then place our left hand, palm upward, in a position under the patient's right sacro-iliac articulation, so we may sense the tissue movement there with the tips of the fingers of our left hand.

We now move the patient's right knee through an arc of about 200 degrees, passing from his left knee, medially and upward, over his abdomen and thence outward laterally to a point at the patient's extreme right. During this movement we keep the patient's right hip joint as near the limit of its rotation as the patient can comfortably bear. This is done to lock the hip joint and to thus produce a single lever of the femur and ilium. The leverage strain is thus produced at the sacro-iliac articulation. This should be done with the femur rotated first one way then the other.

All during the above movements the hip joint should be flexed to the limit which the patient can comfortably bear at any given point of the arc through which the knee is moved. This is accomplished by the operator using, *very slightly,* his own weight.

This extreme rotation of the femur, first one way then the other, accompanied by the maximum flexion of the hip joint in all directions, maintains all the tissue from the sacrum to the knee in sufficient tension to relax it. The movements should be very slowly and carefully made to allow the fibres to relax and the operator to sense the condition of the tissue as he places each part under strain.

The patient's left leg should be likewise used to relax the tissues on the other side of the sacrum after which a correction of a sacro-iliac and lumbosacral bony lesion may be made with any one of the commonly used methods. Treated in this manner these lesions yield much more readily for us. This is especially true when we have the patient maintain this relaxation by a very slow side, back and forward bending at the hips thus carrying his head about through the circumference of a complete circle, his fists meanwhile being firmly pressed against the posterior superior spines of the ilia. The result seems to be a more readily accomplished re-toning of all the tissues about the sacro-iliac articulations.

By similarly carrying any joint in lesion through the maximum range of its articulation; maintaining extreme normal or comfortable rotation, side bending, flexion or extension; by gently subjecting the tissues to stretching strain in every direction normal to the joint, one may more effectively relax the tissues concerned in any joint lesion requiring correction.

The use of luminous electric mild heat applied directly to the skin over the lesioned area is a most valuable aid in promoting the desired relaxation.

Briefly, we do not believe that merely moving or "popping" a joint in lesion will necessarily correct the abnormal condition. If repeated again and again such treatment may improve the range of motion in the joint but unless the tissue is re-toned, stretched gently and manipulated to promote normal tension within the tissue, what is there to prevent a return of the old condition? These chronic lesions, the "come Tuesday back Friday" kind respond so much more satisfactorily to the treatment we have just outlined that we no longer begrudge the giving of time for complete relaxation and re-toning of tissue about a joint in lesion.

HICCOUGHS

L. E. HILLMAN, D.O.
Brush, Colo.

Hiccoughs are caused by an irritation of the peripheral distribution of the phrenic nerve from an abdominal condition, a thoracic disorder, or a local irritant acting upon the center in the medulla. They may follow fright or great emotion and become continuous in influenza, typhoid or other febrile diseases.

The ordinary case one is called to attend is not one following an abdominal operation or carcinoma of the stomach, but is one associated with influenza with both lung and gastric involvement. I usually first exhaust the standard methods of removing the cause or causes. This, of course, includes the thorough emptying of the bowel tract with enemata and abstaining from all food for twenty-four hours, or longer, should there be a return of the hiccoughs. Then turn your attention to the origin of the phrenic nerve at the third, fourth and fifth cervical and if there is a lesion there, adjust it. If not, release the scaleni muscles and bring pressure on the nerve just above the clavicles. If this fails, look for and correct any lesion from the fifth thoracic to the twelfth thoracic. Often there is tension around the fifth thoracic. Pressure on the solar plexus with the palm of hand, tickling the nose and pulling out the tongue are other aids. All of these measures, however, have failed on some occasions, doubtless because they were improperly applied.

However, I have discovered a method which has been a specific in a number of cases. The operator at the right of the patient passes the index finger of the right hand into the patient's mouth and down the throat to a point just back of the hyoid bone where the right vagus nerve passes down through the carotid sheath. With index finger in this position and thumb of left hand externally over this part, compress the nerve between the thumb and finger until hiccoughs cease, usually taking ten or fifteen seconds. This procedure will cause vomiting. If hiccoughs recur the left vagus may be treated the same way by reversing the hands, though the right vagus is more important because of its anatomical connection with the solar plexus and the diaphragm via the phrenic or diaphragmatic plexus.

Diagnosis and Treatment

AN UNIQUE DIAGNOSTIC AID

HEDLEY V. CARTER, D.O.
1 East 42nd Street, New York City

The list of reflexes useful in diagnoses includes cutaneous, plantar extension, tendon—or deep clonic and tonic spasms, and electrical reactions.

To the list of cutaneous reflexes I believe we may add, tentatively at least, another osteopathic discovery. While Head, Mackenzie, Pottenger and others, have noted the frequent hyperalgesia of the skin in diseases of the viscera, sometimes exquisite in cases of pulmonary tuberculosis and pleurisy, I have been unable to find prior mention of a peculiar and constant skin phenomenon which outlines on the surface the extent of deeper situated pathology.

This surface sign is quickly apparent to osteopathically trained fingers with their educated tactile sense. The technic consists in noting an increased resistance or drag and roughness of the skin as the examining fingers are lightly but not too delicately drawn over a morbid region. The extent of the involvement may be delineated by the smoother normal feel of the skin over contiguous healthy regions.

A few experiments in your daily work will readily enable you to recognize this peculiar diagnostic evidence. For example: before deeper palpation of spinal lesions, draw the fingers of one hand down over the bared back of a patient and note any areas of increased resistance of the skin. This should be done with a light even pressure. The feeling has been described as a "moist rubber" sen-

sation. Then check your findings by the usual methods of locating spinal lesions.

You may test your ability to appreciate a "positive" sign dissipating the sensation momentarily by touching the patient with the other hand. A positive reflex, reaction, or sign reappears over a morbid region when the "short circuiting" influence, either of the examiner's other hand or that of an assistant, is removed. There is no change over a healthy region.

It is extraordinary how accurate this localization has been proven by orthodox diagnostic methods, including the roentgen ray. Due to their accessibility, diseased teeth and tonsils are good subjects for experimentation as the findings are quickly proved. Pathological regions in the lungs are also readily outlined and proved by percussion and auscultation.

Many patients are able to feel a "positive" sign, particularly on non-hairy areas. Without making any explanation, use the technic described and ask if the patient notices any difference in the "drag" of the fingers before and while "short circuiting." Some sensitive people will declare the skin over a pathological region "feels like very fine sandpaper" or "emery dust."

Another peculiarity is that these "positive" areas may be defined by the adhesiveness of non-metallic instruments such as a pencil shaft, stiffened rubber tubing, glass rod, etc., as they are drawn over the skin. "Shorting" causes them to slide as over "negative" areas. (I use the term "short circuiting" for its descriptive qualities and for lack of a better one.)

Permit me to add that this procedure has nothing to do with any system of diagnostic reactions. It is, I think, purely an osteopathic discovery. The patient may be in any position relative to the force of gravity or to the points of the compass.

This method of localization has been used and tested for several years. It has been demonstrated and taught to a number of osteopathic physicians who have amply corroborated its practicability.

The explanation of this peculiar objective symptom is mere conjecture. Some years ago an article entitled "The Electropathology of Local Inflammation" was distributed by the manufacturers of a well-known product widely used by the osteopathic profession. This short treatise presented the body as having in the brain a generator of neuro-electricity, in the nerves a series of conductors insulated by the nerve sheaths to maintain nerve energy at a certain pressure. The ganglia function as storage cells or condensors and the skin acts as an insulator, though a poor one.

I believe it is Crile who suggests, in referring to electro-magnetic phenomena of the body, that the liver might be considered as one pole and the brain as the opposite pole of a mass unit.

It has been stated that the intimacy between electricity and the metabolism of a fully ionized cell is so delicate that it has been possible to start cell division in the ovum of a sea urchin by electrochemical stimulus. The groups of ions in the protoplasmic membrane surrounding the cell exert a selective power regulating absorption and excretion which can only take place when the material without the cell meets the electrical requirement, opposite polarity, to the material within the cell.

If disease be considered as electropathology, it may be presumed that electrochemical "losses" are manifest on the surface due to a lowered electrical resistance of the skin, which is at best an inefficient insulator. Wherein may lie the explanation that the "Carter Surface Sign" is a practical diagnostic measure and is surprisingly definitive.

DIFFERENTIAL DIAGNOSIS OF TWO OSTEOPATHIC LESIONS

IRVING D. EWART, D.O.
Albany, Ga.

When a patient complains of pain over the heads of the upper ribs or in the lower lumbar region we find it wise to carefully investigate the causes of the pain before manipulating that tissue. The pain may be due to a mere bony lesion in which the method of correction is usually simple. However, we often find that we are dealing with an acute neuritis resulting from the toxins of some focal infection or intestinal autointoxication.

The condition may be the result of reflex nervous stimulation by way of the sympathetics and due to intestinal gas or impaction. It is quite possible that gas pressure continued in the intestines may so irritate the sympathetic nerves and plexuses as to cause reflex irritation to the point of exhaustion in the superficial or spinal nerves. To our mind this accounts for the co-called fleeting pains of which many patients complain as they locate the pain in one place today and somewhere else tomorrow. Unfortunately, we as physicians are too apt to accuse the patient of hysteria. The gas is known to lodge in different parts of the intestinal tube, what is more logical than to expect the reflex pains to be variously referred to different parts of the body? Practically, we know that the so-called hysteria is surprisingly relieved by the elimination of the gas, along with the change of the intestinal flora.

We have seen almost unbearable, acute brachial neuritis remarkably relieved within five minutes by merely using osteopathic manipulation of the abdomen and intestines to move the gas along. This was done without any local treatment to the dorsal region. We all know that it is not at all unusual to see a case of lumbago all but set on fire by the use of a physic. Apparently the intestinal irritation results in sympathetic reflex irritation to the already over-stimulated lumbar nerves.

To differentiate between these reflex conditions and the ordinary uncomplicated bony lesion, it is well to keep in mind the following: The bony lesion is painful on motion or pressure and may not cause any particular inconvenience to the patient when at rest. On the other hand when the lesion is in the nature of an acute neuritis there is usually pain whether at rest or in motion. In fact, if the pain is severe the patient will often move the arm or leg about seeking to allay the pain.

To the osteopath the recognition of the remote cause of the reflex lesion is most important. That cause should be treated and in most instances the hands should be kept off the area of neuritis. Use mild luminous heat. Be careful that it is not intense enough to stimulate the tissue, particularly the nerves; move any intestinal gas or impactions if possible; change the intestinal flora, avoiding proteins and starches but giving fruits and non-starchy vegetables, milk and also lacto-dextrin (lactose and dextrose in combination). Almonds, figs, and oranges will promote a higher alkalin reserve and a consequent lowering of toxemia. Dried dates are most valuable in promoting the change of the intestinal flora.

Let me repeat, keep the hands off the area of neuritis until all the pain has subsided. Even then much care should be used that one does not excite a recurrence of the acute attack. Make any necessary corrections and then leave it alone. Rely upon mild luminous heat applied to the skin for relaxation.

Beware of the first rib lesion, so-called. Too often we find it to be a form of acute neuritis. A mere thrust or attempt to move the head of the rib will not remove the fundamental cause. More often this attempted correction will "set it on fire." If this mistake is made and the occasion happens to be that of the patient's first visit to the osteopath, the outcome may well be the loss of another recruit in the ranks of osteopathic patients. On the other hand if the case is properly treated, the causes removed and the nerves not further excited, the physician will have made another friend for osteopathy. These patients really suffer acutely and they will not forget the means of alleviation of their pain.

MYELITIS

A Comparison of Treatment Given Two Cases

DONALD B. THORBURN, D.O.
New York City

I wish to bring to your attention two cases with which I have come into contact during the past eighteen months. Both of them were nerve poisoning, in some ways dissimilar and in others strikingly similar. One of these patients was given the benefit of osteopathic treatment while the trouble was still in the corrective stage, the other was allowed to go on to a hopeless state and death.

IMPROPERLY TREATED MYELITIS

Mr. A., a business executive, giving a history of periodic slight illnesses since early childhood which seemed to revolve around his intestines. As early as four years of age the patient had developed intestinal trouble which at the time had been treated with daily doses of castor oil. It is of interest to note that the condition was declared to be inherited from his mother. Following a long course of the castor oil treatment in decreasing doses, he felt somewhat better, though even a walk would bring on vomiting and extreme weakness. From the first he was constipated, a condition which persisted despite the use of every known medication. When he reached the age of twenty-three years, following a boyhood of only moderate health, having passed through the usual children's diseases, he contracted pleurisy and to prevent possible development of tuberculosis, went out West.

Of osteopathic interest is the fact that for some time preceding this illness he was troubled by occasional pain between the shoulder blades, a pain which with time became practically chronic. The patient remained West for seven months and returned feeling much better and with no signs of tuberculosis.

At the age of twenty-eight he was married. During all this time he was subject to indigestion and constipation to which most of the upsets suffered by him could be traced. At the age of thirty-one a suspected appendicitis was cleared up by osteopathic treatment, adding to the evidence piling up against the intestines. At the age of thirty-eight he became subject to a condition in both legs involving the muscles, causing marked contractions and nodules to appear and being accompanied by weakness of the legs. The upper back was also giving considerable trouble. Local muscular work gave relief but the condition either remained or almost immediately reappeared as soon as the local treatments were discontinued. At close to forty years of age, his father, the president of a large company, died, leaving him as the company's head with all the tension that the new position held. The increased responsibilities weighed heavily upon him and seemed to increase the load under which he was now living and working. It was, however, about this time that the patient submitted to a daily abdominal manipulation which up to then he had refused. In about two weeks most of his leg symptoms had disappeared and the intestines themselves had improved markedly, there being a greatly decreased amount of gas and tenderness. His general condition improved noticeably.

In the early months of 1926, at forty-one years, his executive duties became so pressing and his condition having much improved, he gave up the treatments. Towards the end of March he almost contracted blood poisoning as a result of the removal of a wart, and in May he suffered an attack of influenza which at first appeared to be pink eye, but this ran a short course and toward the end of the month he went abroad to rest.

During all this time he had no osteopathic treatment. In June, while in Europe, he developed what was diagnosed as muscular rheumatism which affected his legs and toes, his upper back also had been giving trouble. He hurried back to this country and within two days after his return became paralyzed below his waist line. From then on the symptoms of a cord condition became more and more definite, the shoulders and arms became involved and he definitely developed a cross myelitis affecting the cord at about the level of the sixth dorsal vertebra, the site of the old pain in his back. Six days after the paralysis had set in, a trial period of six abdominal treatments were allowed under protest by his physician. On the fourth day the patient's legs appeared stronger, and on the sixth day his back became more comfortable, yet, notwithstanding these favorable signs the treatments were discontinued after the sixth day. This decision was reached by his wife and attending physician for fear that overstimulation might result in a nerve weakness, and they prescribed absolute rest. In September the patient died.

COMMENT

There are certain outstanding points which a study of the history uncovers. First, that there was undoubtedly an intestinal background to most of his physical difficulties, and second, that this intestinal condition had obtained from early childhood, lasting to his fatal illness. There were likewise two unfortunate decisions made. First, the patient should not have been allowed to go abroad so soon after the "flu"; secondly, he should have immediately upon his return been given the benefit of the treatments which previously had given such quick relief to the intestines, back and leg conditions. Instead, he was allowed to go on to the myelitic condition surrounded by the regular old school methods and carefully guarded against the only treatment that might have effected a cure and which held the only possible chance of preventing a lethal outcome.

CASE HISTORY OF PROPERLY TREATED MYELITIS

The patient, Mr. B., a young man of thirty-five, had returned home after the day's business complaining of a sore throat and general malaise. Next day a previously injured finger became tender followed on the next by tenderness and swelling in the knee, ankle joints and wrists. The family physician was called in, diagnosed the case as arthritis of infectious origin and sent his assistant to administer a trial injection of serum. A slightly unfavorable reaction resulted, namely, increased malaise, headache, and joint pains which were construed as merely the progress of the condition and an increased dose was administered. Again the condition seemed to flare but the same construction was placed upon it and another injection was given of greater dosage. This time there was no room for doubt. A paralysis set in involving practically every voluntary muscle in the body with great pain in the joints affected by the arthritis. Muscle twitchings, inability to locate the position of the legs, and loss of knee jerk showed the spinal cord impairment and with the rapidly decreasing vitality an unfavorable ending seemed imminent.

On the sixth day after the onset of the arthritic condition we were called. We found a patient with practically a complete motor paralysis of the voluntary muscles, a certain amount of motion still being obtainable at the shoulders and hips. He was immediately placed on a diet of orange and lemon juice with a teaspoonful of sodium bicarbonate night and morning. Deep manipulation of the intestines plus a thorough spinal and cervical treatment comprised the initial attack on the condition. After about four days with the decision hanging in the balance the paralysis began to abate. The intestines lost their extreme tenderness, the elimination became more complete and the arthritic process began to recede. The treatment was then extended to the muscles of the affected limbs and the patient was given passive and later light active exercises. Extreme care was taken to protect the heart in this weakened condition and exercises of the Sanford Bennett type were used at first. Once over the crisis, however, progress was fairly rapid and five weeks after the beginning of the illness the patient was able to go to the country to recuperate. Since then he has been seen from time to time and now, a year later, is in robust health.

COMMENT

Here we have two cases of nerve poisoning. One by toxin from the intestines, the other by toxin introduced with a syringe. The initial effect was the same. A poisoning of the nervous system with a resulting motor paralysis. One was allowed to go unchecked into actual nerve degeneration, the other was given the chance of elimination with manipulation. Of the two cases the first would appear to have the best chance inasmuch as this patient had been known to the physician and his

predecessor through years of observation, with the resultant working out of a method of treatment which seemed to reach the seat of trouble. The other a practically new patient with no previous reactions to go on, and with a combination of arthritis and serum poisoning that would make the most courageous hesitate in predicting a happy outcome.

What, you may ask, was the deciding factor that caused the different outcome in these cases? To my mind the time element was the most important. Mr. A.'s case was allowed to advance to a stage of actual degeneration before he was given the benefit of the treatment which was then limited to a number totally inadequate to reach such a condition. In the case of Mr. B. help was given before a state of degeneration was reached, the case being then followed through in a logical manner to its close.

While the forgoing resume is held to be of interest from the case standpoint, it is fundamentally a plea for a broader vision by those immediately in charge of acute cases, the men who pay with the life of the patient for their reluctance in admitting to the case those of another school till the condition is absolutely out of hand. It is when these men recognize their responsibility and place the lives of their charges above everything else, that osteopathy will be admitted to cases in the beginning, and we will have a realization of that broad vision of cooperation without which the lives of those who trust us are only half protected by those to whom they look with full confidence; a confidence which must not be betrayed.

Case Histories

TULAREMIA*

ORVILLE D. ELLIS, D.O.
Norfolk, Neb.

To many of us tularemia is a new disease. From the standpoint of diagnosis I believe it is a disease that needs serious consideration. Tularemia has some of the earmarks of influenza and typhoid. In fact, it has been so diagnosed many times. It has the chilly sensations, fever, prostration, headache and backache of influenza and the fever remissions of typhoid. In most cases, though, we find enlargement of the axillary and chest lymphatics as well. These lymphatic glands must be drained before the patient will begin to recover; and also, there is a distinct rash over the skin surface, particularly of the legs and arms.

It is transmitted to man chiefly by rabbits, from scratching the skin with a broken bone while dressing the rabbit, or by eating infected meat insufficiently cooked. It has also been found to have been transmitted by the bite of the tick, the coyote and of rodents, and by working with the germ in government laboratories.

The government report cases include four in one family at Wallen Creek, Virginia, July, 1925. The father, mother and son died after an illness of six to eight days without any diagnosis being made. The six-year-old daughter survived and a diagnosis of tularemia was made. In her case the sickness started with a conjunctivitis caused by the germ. The family had been eating a large number of rabbits.

One case was reported from Miles City, Montana, apparently from the bite of an infected coyote, in June, 1925. An ulcer developed at the site of the bite, followed by the axillary enlargement. Tests were made on coyotes later and the germs found in the salivary glands.

Eighteen cases have been reported among laboratory workers, at Los Angeles, San Francisco, Washington, D. C., London, England, and Hamilton, Mont. The case at Los Angeles lasted from January 4 to May 1, 1926. The six cases in the laboratory of United States Public Health Service, at Hamilton, Mont., occurred from July 4 to October 2, 1924, and during May, 1925. All of the laboratory cases gained entrance without leaving the slightest evidence of a local lesion and without causing glandular enlargement of any consequence, as is typical in all cases by direct animal or tick infection. A complete report of these various cases can be secured from the Washington bureau.

Surgeon Edward Francis of the Hygienic Laboratory, United States Public Health Service, Washington, D. C., has made considerable study of this condition, especially for the agglutination tests. A summary of this report on 120 cases of tularemia tested for agglutination of the Bacterium Tularense shows that while immunity is marked at the end of six months and one year, it is still present after more than ten to fifteen years have elapsed in every case. The government reports show that an infected rabbit insufficiently cooked will be dangerous as food, but a sufficiently cooked infected rabbit is entirely harmless as food. Heating at 56 to 58 degrees C. kills the organism in cultures and in the spleen tissue in ten minutes.

There are a number of ways by which this germ may make its entry into the body. Among them: (a), contamination of the skin; (b), infectious material in the eyes; (c), contamination of the mouth and indigestion of infected foods; (d), tick bites, their body fluids being especially infective; (e), scratch with bone of infected animals; (f), bites of infected animals; (g), tissues of infected animals; (h), excreta of infected animals.

Hereditary transmission of the germ in the eggs and larvae in eight out of fifteen females inoculated has been demonstrated by animal tests.

The only positive diagnosis of the condition in man is made by the agglutination test, but the general symptoms will usually diagnose the condition for you before you receive your report from the laboratory.

As I said before, the symptoms are suggestive of influenza or typhoid. There is the rise in temperature to 103 or 104 in the afternoon and evening, the fever condition lasting from fourteen to twenty-eight days, with remissions every three or four days. There will be chilly sensations, great prostration, drowsiness, continuous headache or headburn, extreme and continuous constipation, loss of appetite, glandular enlargement of elbow, axillary and chest glands particularly, rash to pustular blotches over body, and aching pains throughout the body, especially in back, which last during the entire course of the disease. Convalescence is marked by extreme weakness and a tendency to tire on exertion, with a very slow return to normal strength. Relapses occur in some cases after six to ten months, which are of short duration, coming on after some extra exertion.

The following case has been under my personal observation for the last five months, and it will be noted from the description of his condition how nearly it follows true to form: Following a rabbit hunt on Thanksgiving Day, November 25, 1926, the patient scratched his finger with the leg bone of a rabbit he brought back with him. He thought nothing of it, as it was a very slight scratch and seemed to heal up in a couple of days. On Sunday, November 28, he felt sick and in the evening seemed to have considerable temperature, but did not call a doctor until the next morning.

The following morning he had a temperature of 103.6 and other symptoms of influenza. Regular treatment for influenza failed to bring results and on November 30 his temperature was still at 103. On December 1 he complained of a lump under his left arm, not large enough to suspect septicemia, but upon lancing the site of the rabbit scratch a small amount of pus was withdrawn. The temperature was a little lower on this date. He was treated at his home every day until December 6, when he was able to come to the office and also able to return to work that day. He was extremely weak and constipated, but his temperature was practically gone. However, the axillary glands were gradually increasing in size and the elbow lymphatics enlarging.

On December 9 several doctors in consultation decided to x-ray the chest and take a specimen of his blood for the agglutination test. The x-ray revealed that a large number of the lymphatics of the chest were enlarged, particularly one chain extending across the chest near the top of the sternum. A specimen of his blood was sent to the Mayo clinic, whose report indicated suspicion of tularemia, suggesting that a similar specimen

*Given at meeting of Northwest Nebraska Osteopathic Association, Columbus, 1927.

be sent to Surgeon Francis at Washington, D. C. This was done, and a report received on December 24 of triple positive tularemia.

We lanced the axillary glands on December 24, inserting a drain. On December 30 two glands of the elbow were lanced and drained. It was found necessary to lance the glands of the neck over the left shoulder on January 9, 1927. This incision, being very deep, drained a large quantity of pus. On this time the finger cut and the elbow had entirely healed over. On January 14 it was found necessary to again lance the elbow glands, draining considerable pus. By February 5 the shoulder and elbow glands were allowed to heal, the axillary still draining. By March a scab had formed under the arm and about two weeks later the patient was apparently well.

COMMENTS

Considerable trouble was experienced in breathing when the glands of the chest were enlarging, disappearing after lancing the axillary glands. At all times during the condition he was extremely weak and had no "pep," and when he returned to work it was several weeks before he attempted to do his usual work; he was terribly constipated so that even the most drastic laxatives had no effect on him; and he had a continuous headburning and dizziness.

AN UNUSUAL CASE OF EPIGASTRIC HERNIA

H. C. WALLACE, D.O.
Southwestern Osteopathic Sanitarium and Hospital, Wichita, Kansas

Patient.—A young girl 15 years of age, of American parentage and in attendance at school.

History and Symptoms.—Family history is negative except for the fact that the patient's two sisters failed to menstruate until their sixteenth year. The patient's previous history was negative. She had always been well and prominent in school athletics. The patient complained of pain and soreness in the region of the umbilicus and slightly to the right. It had been present for three weeks and had begun with a fall on a stairway in which she had made violent efforts to check her fall. Although the pain was severe it had not required an opiate at any time. The pain did not radiate and presented no particular characteristics. Appetite was poor and there had been slight nausea a few times but no emesis.

Physical Findings.—The heart and circulatory and respiratory systems were negative. Also, urinary and nervous systems were negative. Menstrual periods had not appeared and no symptoms had been noted. The patient presented an anxious and careworn expression, somewhat emaciated. The skin was of good appearance except for slight acne eruption on face and shoulders. Temperature 98.8; pulse 95; respiration 20; blood pressure, systolic 114, diastolic 64; pulse pressure 50. Tonsils infected and cervical glands enlarged. Heart and lung examination negative. Palpation of abdomen revealed a mass about the size of the umbilicus which was very tender. There was marked muscular rigidity over the entire abdomen, especially on the right side. Kidneys not palpable and negative to fist percussion. Liver and gall bladder negative. McBurney's point negative. Laboratory examination of blood and urine negative.

No pelvic examination was made on account of absence of genito-urinary symptoms and history of delayed menses in sisters and very evident pathology high in the abdomen.

Tentative Diagnosis.—Hernia, probably containing omentum. Operation without delay was advised.

Operation.—Right rectus incision was made over the palpable mass. On separating the fibers of rectus muscle a large amount of dirty, brownish, bloodstained fluid was evacuated and we came in contact with a blackened mass which proved to be omentum with the vessels immensely engorged and the entire protruding structure a sleek, slimy and almost black mass. On lifting the omentum there appeared a dark purplish structure about the size of an egg, which we first took to be a loop of indurated, swollen transverse colon. On examination, however, we found a structure on the right (then anterior) side simulating a round ligament, and just above, another structure with the appearance of a fallopian tube which, following toward its distal portion, led to an ovary. Examination of the left side revealed similar anatomy.

We had an epigastric hernia in which was incarcerated a large portion of the omentum and fundus of the uterus with portions of the tubes and round ligaments. Further exploration of the abdomen revealed a very large mass with the consistency of a parovarian cyst but which was continuous with the uterus, both anteriorally and posteriorally, and occupied the medium portion of the lower abdomen and pelvis. It could not be displaced far in any direction and cleaved to no other structure. It had to be the vagina. The appendix was found coiled at the lower end of the cecum and to contain three large fecaliths. It was removed. The uterus was replaced into the abdomen and the blackened, incarcerated portion (about two-thirds) of the omentum was removed. The wound was closed with drainage. Immediate examination of the vulva revealed a bulging imperforate hymen which we nicked with the point of the knife to allow a slow drainage of two or three quarts of menstrual blood, thus allowing of no sudden lessening of the intra-abdominal pressure.

COMMENT

The patient made an uneventful recovery and was out of bed the eleventh day. A few days later, with a local anesthetic, a crucial incision was made into the thick hymen and part of the posterior flaps were removed.

It is unusual to find a case of imperforate hymen with retained menses of this magnitude without having marked and troublesome symptoms.

ACUTE INFECTIVE INFLAMMATION OF HIP JOINT

RUSSELL C. McCAUGHAN, D.O.
Kokomo, Ind.

Patient.—A boy 8 years of age of normal physical development, and in school, was examined October 3, 1925. His family history was negative and his previous illnesses were slight with no complications or sequelae.

Complaints.—He complained of severe, steady pain in area of right Poupart's ligament and of inability to extend right thigh at hip joint. There was an abrupt onset on the day previous to examination and slight pain on urination.

Symptoms and Physical Findings.—The patient was in pain lying on right side with right thigh and leg flexed to limit. His face was flushed and his lips dry. There was slight pharyngitis. Temperature 104; pulse 130; respiration 26. The urine showed urates and uric acid crystals in abundance—otherwise it was normal. Red blood count normal; white count 11,500—differential was not made. Attempts to extend the right thigh produced pain and lumbar lordosis; there was no added pain on pressure on great trochanter.

Possible Diagnosis.—Acute mono-articular rheumatism; inflammation of acetabulum and head of femur from other infections, including tuberculosis, infantile paralysis, psoas abscess, appendicitis and urinary cystitis.

This patient ran a high fever—103 to 104—steadily for three days. A radiograph on October 7, 1925, showed slight erosion of acetabulum and head of femur with considerable cloudiness through whole synovial sac. No pus could be demonstrated.

Diagnosis.—Acute infective inflammation of right hip joint, not rheumatic and probably not tubercular.

Acute rheumatic fever was ruled out on account of lack of typical fever chart, duration of condition, lack of swelling or redness and tenderness under pressure on the femoral head. Psoas abscess did not develop, nor did appendicitis, which had been considered remote possibilities. Urinary cystitis, non-purulent, was present as repeated urinary examination showed. Uric acid crystals, mucus, frequent urination and slight traces of blood at

times appeared. Infantile paralysis did not develop although there was considerable flacid paralysis of both legs, left as well as right.

The fever remained high, very gradually reducing from 104 to 99 each day, but rising to 104 on any rapid change in position of the hip. Patient was never entirely free from fever until February 1, 1926.

Treatment.—Osteopathic manipulation daily in an effort to reduce temperature, promote elimination and resistance to infection. (It is not necessary to say that absolutely no manipulation of the affected joint was attempted or allowed. A light diet with plenty of fruit and water was enforced.

On October 18, 1925, a long Buck's adhesive extension was applied with five-pound weight rapidly raised to eight pounds, the thigh in flexion as comfort demanded, but with knee straight. The plane supporting the thigh and leg was gradually lowered until complete extension of the thigh was obtained. On November 14, 1925, a long plaster of Paris spica from waist down, including right thigh and leg and foot, was applied. (A vicious flare-up of temperature to 105 for twenty-four hours occurred here, subsiding slowly.) Adhesive strips for reapplication of extension had been replaced under cast and the weight seemed to aid in reducing the temperature and some pain incident to its removal. Thereafter the weight was rapidly reduced and omitted in about ten days.

The cast was removed January 11, 1926, and passive movement of hip joint began. January 15, locomotion with assistance was begun.

Result. February 26, 1926, the patient was able to come to office and was dismissed under observation on March 15, 1926. There is perfect motion in the hip, no shortening or limitation, no constitutional symptoms, no recurrence to date—February 23, 1927. Patient is very active and in school. Flaccid partial paralysis mentioned as present in both legs has entirely cleared up.

REMARKS

A difficult case because of extremes of temperature, pain and prostration over a long period of time. This is another case illustrating the desirability of complete rest during acute inflammation of joints. Even the movement incident to changing of dressings caused acute exacerbations of temperature and extreme pain.

Proper osteopathic treatment was entirely satisfactory as a therapeutic measure. Medically treated patients with long confinement and restraint rarely show such good results in general health or such rapid repair in this difficult area.

SECONDARY ANEMIA (IDIOPATHIC)

DOUGLAS DALE WAITLEY, D.O.
Evanston, Ill.

Patient.—A university student, aged 20, of an excellent family came under observation May 4, 1926. She apparently was in fair health, according to her own statements.

Present Complaint.—Patient complained of tired feeling and fatigue to point of exhaustion after the slightest exertion. The patient noticed these symptoms about one month before presenting herself for examination. The condition gradually became worse, and sleeplessness developed. She was subject to frequent colds and easily became excited and "upset." During a permanent wave procedure for her hair, she became hysterical and cried continuously during the process. It had been recommended by another that she drop out of school for a year as she was suffering from a case of "nerves." She had lost a few pounds of weight and complained of occasional night sweats. No cough was noticed.

Past Sickness.—Measles—1910; mumps—1912; chicken pox—1913; pyelitis—(B. Coli)—1914.

Family History.—Father and mother, both aged 57, were well as were two brothers aged 31 and 34, and a sister, 23 years old.

Menstruation.—Of five-day type, painless and regular in frequency and amount.

Habits.—Fond of sweets, of which she eats excessively. Does not drink coffee or tea and sleeps eight or ten hours, but takes little outdoor exercise.

Physical Examination.—Pulse—90; respiration—18; temperature 97.8; blood pressure, S 94, D 54; reflexes: eye, normal; patellar, normal; Romberg sign not present; Babinski, negative; nutrition, fair; gait, normal; mentality, excellent.

Head and Neck.—Throat is red and injected; tonsils have been removed and the anterior left pillar is destroyed. Her ears are normal and her eyes are affected with conjunctiva, light pink in color; nose is normal and teeth are good.

Thorax.—Heart and lungs are normal. Chest expansion is normal.

Abdomen.—Slight rigidity over McBurney's point caused by appendectomy; eruption and masses are negative.

Extremities—No edema found; arch motion is normal.

Osteopathic Structural—(a) Spinal: Extension 11-12 dorsal, spinous processes left. Extension 1-2 cervical, spinous processes left. Slight posterior curve. (b) Sacro-iliac: Normal. (c) Extremities: Radio-ulnar, right, anterior subluxation.

Laboratory Report—

Red cell, 3,400,000; white cell, 6,800; hemoglobin, 68% polymorphonuclear neutrophile, 78%; small lymphoctye, 15%; large lymphocyte, 5%; transitional, 1%; basophile, 1%.

Urinalysis

Sp. Gr.	1010
Color	straw
Sediment	none
Total solids	46.
Amount	1500 cc.
Acidity	37°
Urea	28 gm.
Ammonia	.4
Chlorides	2.6
Phosphates	.31

Sugar	(glucose) negative
Acetone	negative
Diacetic	negative
Serum Albumin	negative
Nucleo Albumin	negative
Indican	negative
Bile	negative
Pus	negative

Microscopic

Blood	negative
Pus	negative
Epithelial cells	few
Uric acid	few
Urates	few
Oxalates	none

DISCUSSION

A patient complaining of exhaustion and fatigue upon the slightest exertion presents the following possibilities to be accepted or ruled out: Tuberculosis, focal infection, typhoid, anemia (primary, secondary), hemorrhage (obscure), acidosis, hypotension, organic heart, malignancy, neurasthenia, malaria, neurangiosis.

(1) Tuberculosis was ruled out because of absence of rales, afternoon temperature, cough, and regular night sweats.

(2) Examination of throat, sinuses, gallbladder and teeth gave no evidence of focal infection. These findings were supported by the blood count.

(3) Typhoid; no lymphocytosis, temperature or abdominal symptoms.

(4) Hemorrhage; no evidence in stool or sputum. Pulse normal.

(5) Acidosis; urine negative and respirations normal.

(6) Hypotension; undoubtedly the lowered blood pressure has an indirect bearing upon the general body functions.

(7) Organic heart; no murmurs present, outline normal.

(8) No evidence of any form of malignancy.

(9) Patient in excellent mental condition.

(10) Examination of blood smear revealed no evidence of malaria.

(11) Neurangiosis; no symptoms.

(12) Blood picture revealed a low red cell count, decreased hemoglobin, but no plus color index. The absence of poikilocytosis, plus color index and low Hb. ruled out pernicious anemia.

Diagnosis.—Secondary anemia (idiopathic); hypotention (secondary to anemic condition).

Outcome.—General osteopathic treatment was instigated, with special attention given to elevation of ribs, liver, stimulative treatment of vagus, and upper dorsal area. A diet which was composed largely of foods rich in iron and calcium was advised. Medical diathermy was given through the thigh for one-half hour daily for the first two weeks. The patient responded very rapidly as is shown in the following blood counts: 5-7-26, red cell, 3,800,000; 5-14-26, red cell, 4,100,000; 5-24-26, red cell, 4,500,000; 7-12-26, red cell, 4,800,000, Hb.—85%. The patient made an uneventful recovery. She gained 8 pounds and has been reported "very well" ever since her blood count returned to normal.

Ear, Nose, Throat and Eye

CONDUCTED BY AMERICAN OSTEOPATHIC SOCIETY OF OPHTHALMOLOGY AND OTO-LARYNGOLOGY

J. M. Watters, D.O., Chairman

ACCESSORY SINUS DISEASE

L. S. LARIMORE, D.O.
Kansas City, Mo.

Surgery is indicated as a curative measure in chronic sinus disease in a very small percentage of cases. The remarks, often heard, "I had a nasal operation which did little or no good," or "one nasal operation leads to another," are too often justifiable. We should consider that submucous resections are for correction of septal deflections or spurs of the nasal septa. A submucous resection or, in rare cases, removal of the middle turbinates accomplishes all we can hope for in bettering ventilation.

What are the most important etiological factors of sinus disease? The one paramount factor over which we have little control when the subject presents a chronic sinus disease is disturbed or deficient nasal respiratory function. It begins in infancy with mouth breathing which interferes with the development of the accessory sinuses during childhood and the process of filtering and cleansing of the inspired air. In many cases we find the ciliated epithelium has never functioned properly.

Repeated attacks of inflammation in the nose and the extension into the sinuses give rise to chronic inflammatory changes in the sinus mucosa, resulting in thickening of the mucous membrane and pressure on the deeper layers containing the glands. The mucous membrane becomes edematous and the glands become cystic. The antrum is particularly susceptible to these changes because of its position. No doubt a large middle turbinate which hugs the lateral wall is an important factor in the causation, as it prevents aëration. In acute suppurating sinus infections the antrum is the last to drain. On numerous occasions it has been my experience to find large quantities of pus in the antra, following an acute cold, after all symptoms had disappeared and the nose showed no signs of pus. To my mind, it is not difficult to conceive of chronic changes in the antrum without very marked signs in the nose.

As a rule the hyperplastic changes which give rise to symptoms occur in adults. However, we have had some experience with polypoid changes in children, and no doubt as our knowledge of sinus disease in childhood increases, we will have more occasion to see these conditions.

Since the real etiology of sinus disease begins in early childhood, we must teach the child to breathe through the nose not only to develop the chest and procure proper oxidation, but to assist in developing properly the nasal accessory sinuses and the accompanying function of ciliated epithelium which is our main protection against nasal sinus disease.

Remove excessive adenoid tissue and hypertrophied tonsils early.

Caution mothers to assist the child to breathe through the nose, using forced nasal inspiration in addition to deep breathing.

Use surgery to correct abnormal anatomy, drain pus and restore as nearly as possible normal function.

Do not overlook devitalized teeth in the floor of the antra. Remember the dependency of drainage, especially the maxillary antra.

Irrigation is often of paramount importance and must be done only by one thoroughly familiar with proper technic, indications and dangers.

In this short discussion I have only aimed to call your attention to this important and much overlooked common disease which bears a close relation to eighty per cent of all chronic disease.

Business Efficiency

THE EFFICIENT OSTEOPATH

C. C. REID, D.O.
Denver

X.

HABITS

Last month we finished the discussion of personality. Of course a great deal more could have been said, but this being only a brief discussion of some of the most glaring points of inefficiency, there is no effort to go into the subject exhaustively.

We wish now to point out a few of the habits that doctors form which gradually make for inefficiency, failure and even destruction.

First. Sleeping during working hours. A doctor should have his hours painted on the door rather briefly, if he has them there at all, say from 10 to 12 and 2 to 4. Leave the hours off altogether, if working by appointment. The hours 10 to 12 and 2 to 4 on the door do not mean that he only works during those hours, but this announcement makes it obligatory that he be in the office during those hours. When people come into the office during those hours and do not find the doctor in they are likely to jump to the conclusion, correctly or incorrectly, that he is careless in his habits generally. For this reason it is well to have short office hours announced. It gives time for making calls and getting away early from the office after the work of the day seems to be done.

Sleeping during working hours when people are coming in is a habit that just a few doctors have, medical as well as osteopathic. We have known of such instances. It always takes a few minutes for all the brain cells to become thoroughly aroused. On waking up, the doctor would mope around for a few minutes as though he had been doped, and of course the patient would notice the inattention. We have known one doctor who lost two or three patients on account of sleeping during office hours. He lost their respect, their recommendations and their patronage.

There is nothing against taking a nap immediately following the noonday luncheon for fifteen or twenty minutes. If one expects to attain a high degree of success, however, one should be wide awake and ready at all times when people have a right to expect it.

Second. Too many or too few vacations. Some doctors form the habit of forever sticking by their business and not taking a vacation for years. They become more or less stale physically and mentally. They will not take a vacation, even to the extent of attending a convention where they can brush up their therapeutics and get some idea of what other doctors are doing.

On the other hand, there are doctors who take too many vacations. They go away every month or two on some trip, absenting themselves from the office and leaving their patients without proper care. This naturally makes the patients consider going to some other physician.

The fellow who takes too many vacations is allowing his practice to run down.

Third. Drink, tobacco, women and gambling. Many successful doctors have been moderate drinkers or even inebriates at times, having their spree of drunkenness. Of course, it goes without saying that this is a serious mistake for any physician. He sins with light, because he knows what the bad effects of strong drink are upon the body. Further reference to this is not essential here.

Tobacco. A prominent medical physician once gave a lecture on cancer. He went on to tell how smoking sometimes causes cancer of the lip or tongue. Yet he was a smoker and many of his professional brethren "always had, and always would."

The sensation produced in the body by various agencies when the habit is formed are difficult for men to give up, even when they know it is doing them harm. This is as true of nicotine users as of opium and morphine users. One who says anything against many of the ordinary habits that are common to humanity is usually set down as a crank even though one be a doctor who has studied and knows the evil effects of such habits. But at least a doctor should not use tobacco in his office. If he must smoke, let it be away from the office, for the sake of many delicately strung people who might seek treatment there.

Women. In treating women the doctor is confronted with temptations more numerous and perhaps stronger than in most vocations. The doctor who yields to these sexual impulses is ruining himself not only professionally, but he is risking the conventional domestic peace and contentment he may be so fortunate as to have or later find.

Gambling. The habit of gambling seems to get into the blood if it is indulged to any great extent. Poker playing and other forms of gambling gradually spoil a doctor for the highest ideals of a practicing physician. It is a very serious mistake in any man's life, for not only is it detrimental to his business but to his growth of character and manhood.

Fourth. Buys only when he cannot borrow. Some doctors get into the habit of borrowing instruments, surgical dressings, books, etc. Since they find such an easy way of getting things, they put off buying, and borrowing becomes a habit. They become a nuisance to their fellow practitioners or neighbors, which makes for wrong relations and frequently destroys friendship and fraternity.

Fifth. Inattention, forgetfulness. The doctor should pay close attention to his patients, their treatment, diagnosis, and even to their names. It is well to remember names. So many become careless along this line and do not know their patients by name as they should. When a patient's appointment is forgotten, he is disappointed, his time has been taken up and he is impressed with the idea that the doctor does not value his patronage. This is a source of considerable loss to the doctor. A doctor who does not book his own appointments should have a secretary who will exercise every care about details of appointments.

Sixth. Slow, lack of energy. Doctors who lack energy usually lack ambition. Doctors who are slow and "pepless" do not accomplish very much in the way of getting work done and their efficiency never reaches any very high state, hence they always remain in the mediocre class.

Seven. Laziness, carelessness. Laziness is inexcusable in a doctor. It is all right for a physician to work up his efficiency so that he does no unnecessary labor. In the long run he is going to need every ounce of energy that he has and can conserve. However, this is no ground for being a slacker on the job.

Some doctors get nervous or in a hurry, slam things around and become generally careless. They overlook details and do things in a careless manner. They go into the laboratory and spill things around, making four times as much muss as is necessary, breaking test tubes and other apparatus.

Eighth. Wrong thinking. This is as bad a habit as breaking and wasting laboratory paraphernalia. Some people are untidy in their minds, in their thinking and in the arrangement of ideas. When their experiences are not classified, their memory becomes poor for recalling things, they do not think straight, they cannot reason well and they do not make good diagnosticians. They often become cynical, unkind and critical, both of their patrons and their professional brethren.

Ninth. Gets into ruts and stays there. The doctor who is careless, never goes to conventions or takes postgraduate work. He thinks wrong and has other bad habits, is very likely to get into the habit of doing things just about a certain way, stabilizing in that position and making no progress. This, of course, makes for general inefficiency.

Tenth. Procrastination. It has been said that "procrastination is the thief of time." Putting off fulfilling one's ambitions and desires not only wastes a doctor's time, but it wastes his mental energy, allowing his ambitions to go unfulfilled until gradually his desires become less, his will power becomes weak and ultimately he becomes helpless because of continually postponing the fulfillment of his resolutions.

This short discussion of habits is meant merely to call the attention of the reader to a few examples only. There are numerous other impediments to success, but even from these few we can see how expensive it is to tolerate bad habits. The doctor pays a great deal for these indulgences in the money that he does not collect, in the satisfaction that he does not get, in the respect that he cannot command.

Colleges

PHILADELPHIA COLLEGE OF OSTEOPATHY

The faculty members in attendance at the National Association meeting at Denver include Dean Edgar O. Holden, Dr. Phyllis W. Holden, Dr. J. Ivan Dufur, Dr. Paul T. Lloyd, Dr. Ernest A. Johnson, Dr. M. F. D'Eliscu, and Dr. George S. Rothmeyer. Several students from the college also made the trip.

The past year's record has been unusually satisfactory, particularly as to scholastic attainments, in all departments of the college.

Before the opening of the college year in September ground will be broken for a new college building and hospital. Students look forward with pleasure to the change. Our old quarters have been outgrown. The architects' plan represents a building of which the profession may be proud.

The Registrar's office is exceedingly busy this summer attending to the correspondence with prospective students. The entering class promises to equal the size of the June graduating class, which was the largest in the history of the college.

DES MOINES STILL COLLEGE OF OSTEOPATHY AND SURGERY

Prof. C. J. Gordon, B.A., of Parkersburg, Ia., has been appointed associate professor of chemistry and will assume his duties this fall, reports the Des Moines *Register*. Prof. Gordon specialized in physiological chemistry at the State University of Iowa.

KIRKSVILLE COLLEGE OF OSTEOPATHY AND SURGERY

Dr. "Gil" Meyers, Athletic Director for the K. C. O. S., has practically completed the schedule for the coming football season. A glance will convince one that he has set out a difficult task for his huskies for it is by a great deal the hardest schedule ever arranged for the Rams. However, with a year's work as a background and many letter-men for a nucleus, the large number of athletes who have already matriculated indicates that Dr. Meyers will be able to construct a team that can handle this hard schedule.

October 1—Haskell Indians, at Lawrence, Kans.
October 7—Arkansas Aggies, at Russellville, Ark.
October 15—Westminster College, at Fulton, Mo.
October 22—Iowa Wesleyan, at Kirksville.

October 29—K. C. University, at Kirksville.

November 5—Missouri School of Mines, at Rolla, Mo.

November 12—Open.

November 18—Warrensburg Teachers, at Kirksville.

November 24—Des Moines Still College, at Kirksville.

Dr. Meyers expects to fill the November 12 date with either Morningside College of Sioux City, or Upper Iowa University of Fayette, Iowa, to be played away from home.

The Haskell Indians need no introduction to football fans as for the past several years they have been one of the strongest teams in the country. The Arkansas Aggies were on the Army (West Point) schedule two years ago and gave the soldiers a good battle. In 1922 the Aggies defeated the A. S. O. eight to nothing. Westminster won the championship of the Missouri College Union last year. The Kansas City University is an unknown quantity. They have put out some strong teams in the past and with a large enrollment to draw from this year, they will undoubtedly provide plenty of competition. The Rolla Miners are always hard to beat. The Rams are determined to put over a win on the Miners this year for they were not satisfied with the outcome of last year's game at Rolla. The Warrensburg Teachers won the championship of the M. I. A. A. last year, and will have another strong aggregation this year. We are glad to have this game to compare the strength of the Rams with other teams in the Mississippi Teachers College Association. Last, but far from least, is the annual struggle with the Des Moines Pirates. They handled the Rams quite roughly last year and Dr. Meyers is making plans to reverse the outcome this season. It will make a splendid game for Thanksgiving Day and a great finale for the season.

Field doctors are taking an increased interest in directing promising local athletes to enter the Kirksville College. The splendid success of several osteopathic athletic directors is attracting much attention. The training and publicity received while in Kirksville furnishes a splendid background for success in this field, whether as a vocation or an avocation.

Practice has been called for the week preceding the opening of school so that the squad may be ready for the first game with the Indians.

Book Notices

FINANCIAL SUCCESS THROUGH CREATIVE THOUGHT. By Wallace D. Wattles. Cloth. Price $1.50. Holyoke, Mass.: Elizabeth Towne, Co., Inc.

Here is a book that, as the author says, tells how to do things in such a way as to bring success. He treats of getting rich as a science. He seeks to lay down fundamental laws which, if followed, make prosperity sure. It was brought to the writer's attention by a very prosperous New York business man, who said, "I seldom pay attention or waste any time with the average writers on such subjects but there is something that has attracted my attention. It is helpful and I have found it of practical everyday service."

This little book tries to get one out of the competitive rut and helps one to see that the great purpose of getting, having and enjoying is that one might express himself or that Infinite Force might express itself more fully through him to the world. Or, as the author puts it, "The desire for riches is really a desire for a fuller, richer, more abundant life, and that desire is praiseworthy. The man who does not desire to live more abundantly is abnormal."

SELF CARE FOR THE DIABETIC; For the Use of Diabetic Patients. By J. J. Conybeare, M.C., M.D. Oxon., F.R.C.P. (Lond.) Assistant Physician to Guy's Hospital. Oxford University Press, 1926.

This little book of seventy pages put out by the Oxford Press is a most practical piece of scientific literature presented in plain language so that the diabetic patient, for whom it is written, can readily understand and follow it. It will be a decided help to the physician in educating the diabetic to his problems and will undoubtedly prevent many failures that may result from a lack of intelligent cooperation. The book is more than educational, it is instructive. It contains dietary outlines that will be a distinct aid to both physician and patient.

S. V. R.

A HANDBOOK OF DISEASES OF THE STOMACH. By Stanley Wyard, M.D., B.S., M.R.C.P., Physician to the Bolingbroke Hospital and the Victoria Hospital for Children, Assistant Physician to the Cancer Hospital. Cloth. Pp. 387, with 32 illustrations. Price $5. New York and London: Humphrey Milford, Oxford University Press, 1927.

To the doctor who does not have a good book on the stomach and intestinal tract, this book will be of definite service. It gives the usual textbook classification of diseases of the stomach but becomes more practical in the discussion of structural diseases such as cancer, ulcer, pyloric obstruction, etc. It discusses postoperative procedures, pointing out the merits and demerits of various operations and outlining the proper postoperative treatment. It is curious to note that the author does not give much attention to the relation of focal infection to peptic ulcer. This relationship has been well established by several research workers in this country.

S. V. R.

INTRACRANIAL TUMORS, and Some Errors in Their Diagnosis. By Sir James Purves-Stewart, D.C.M.G., C.B., M.D. (Edin.), F.R.C.P., Senior Physician to Westminster Hospital; Physician to the Royal National Orthopedic Hospital; Consulting Physician to the West End Hospital for Nervous Diseases; Member correspondant de la Societe de Neurologie de Paris, etc. Cloth. Pp. 206, with 71 illustrations. Price $3.75. New York and London: Humphrey Milford, Oxford University Press, 1927.

An excellent reference book for all physicians. It is written in a modest, simple style. It is concise, yet the different varieties of brain tumors are well illustrated by comprehensive case records.

The few pages devoted to general and localizing symptoms are gems for the valuable information given briefly. This will appeal to the general practitioner, while the more detailed discussions of the different varieties of intracranial tumors, different both as regards location as well as all pathology, will be found helpful even to the neurological expert.

H. L. C.

THE SURGICAL CLINICS OF NORTH AMERICA (Cancer Number—April, 1927) Volume 7, Number 2. Pp. 231, with 113 illustrations. Price per clinic year (Feb., 1927, to Dec., 1927) paper, $12; cloth, $16 net. Philadelphia and London: W. B. Saunders Company.

This volume is entirely devoted to the cancer problem. The discussions throughout the book are of a clinical nature, and the conclusions drawn from clinical observations.

Much painstaking, conscientious effort by well-informed individuals on the cancer question resulting in valuable data has been compiled and is herewith presented.

Every physician who treats cancer sufferers should study it carefully. For the general practitioner there are many points of interest and enlightenment to be found in it.

The present recognized treatment for many varieties of cancer is described. The methods of diagnosis and treament of common as well as uncommon cancers are ably presented with the results obtained.

H. L. C.

THE DISEASES OF INFANTS AND CHILDREN. By J. P. Crozer Griffith, M.D., Ph.D., Professor of Pediatrics in the Graduate School of Medicine of the University of Pennsylvania, and A. Graeme Mitchell, M.D., Professor of Pediatrics, College of Medicine, University of Cincinnati. Second Edition, reset. Cloth, $20 net. Two octavo volumes totaling 1715 pages with 461 illustrations, including 20 plates in colors. Philadelphia and London: W. B. Saunders Company, 1927.

Pediatrics is an extremely large branch of the healing art and one in which the osteopath, especially, should be proficient. Many very valuable works are to be found on this subject, yet as a science it has made such wonderful advances in the past few years, many new methods of diagnosis and treatment being evolved, that it is necessary for the successful physician and surgeon to be well informed on the latest data.

This new 1927 edition by Griffith and Mitchell, two beautiful volumes, gives a very fine review of the subject of modern pediatrics. The work gives not only their own clinical findings but also those of other prominent medical

authorities, both American and foreign. It includes such subjects in surgery and other special branches as the physician treating the diseases of children should be more or less familiar with. Temperature charts and photographic and other illustrations are in most instances accompanied by brief synopses of the histories of the cases.

Throughout the textbook the metric and the English systems of measurements have been used together. Footnote references are given in profusion. The work is indeed very complete. Some especially interesting material on the care of the premature infant is one of the features of the work.

X-RAY DIAGNOSIS, A Manual for Surgeons, Practitioners and Students. By J. Magnus Redding, F.R.C.S., Senior Surgical Radiologist to Guy's Hospital. Pp. 228, with 80 skiagraphic plates. Cloth. Price $7. New York: William Wood and Company, 1927.

In writing this book the author has endeavored to adequately outline all of those conditions which are encountered at all frequently and to place especial emphasis on those which are common.

All conditions discussed are freely illustrated with skiagraphic plates, and the descriptions of the lesions affecting the different anatomical systems are preceded in every instance by an analysis of the appearances produced by the normal structure, and of the modifications in those appearances which result from disease.

This book is an outline of radiographic diagnosis, and, therefore, no detailed description of technic is included. It is a great aid to the student, and is especially helpful to the surgeon and practitioner whose work brings them into constant touch with radiology, but who have had neither the time nor the facilities for making a special study of the subject. It must be remembered that the ultimate aim of any examination is the formation of a reasoned diagnosis, and that without the requisite knowledge it is impossible to arrive at this end.

CITY HEALTH ADMINISTRATION. By Carl E. McCombs. Cloth. Pp. 524. Price $5.50. New York: The Macmillan Company, 1927.

The author has been a member of the staff of the New York Bureau of Municipal Research and Training School for Public Service for the past fifteen years. In that capacity he has made surveys of state and local health administration, and has had to do with the instruction of several hundred teachers and students of government on these subjects. He has written a book to fill a need, which he has observed, for real knowledge of the conduct of health administration, and has written it so that the layman can understand it. It takes up municipal health functions; the organization and administration of sickness preventive functions; the organization and administration of sickness treatment functions. He goes into sufficient detail on all these matters to show what our municipal governments are doing in the way of health work and the relation of that work to such as is done by the states.

MEDICAL SCIENCE FOR EVERYDAY USE. By Shields Warren, A.B., M.D. Cloth. Pp. 177. Price $2. Philadelphia and New York: Lea & Febiger, 1927.

This is a collection of popular articles selected from many which the author has contributed to the Boston Sunday Herald. Typical popular health education from the drug doctors' standpoint.

MODERN MEDICINE. Its Theory and Practice, in original contributions by American and foreign authors. Edited by Sir William Osler, Bart., M.D., F.R.S. Third edition. Re-edited by Thomas McCrae, M.D., Professor of Medicine in the Jefferson Medical College, Philadelphia, assisted by Elmer H. Funk, M.D., Assistant Professor of Medicine, same. Vol. 4, Diseases of the Respiratory and Circulatory Systems. Cloth. Pp. 1011, with 7 plates and 104 other illustrations. Philadelphia: Lea & Febiger, 1927.

Sir William Osler will be remembered by posterity, not as a great discoverer nor as a leader in any important medical movement, but as a pioneer among those recognizing the limitations of drug medicine. The truths he wrote were lasting truths. This system of medicine, first arranged by him some twenty years ago, consists of a number of discussions of things of interest in the medical world, longer than the limitations of the ordinary textbook would permit, yet shorter than would be written for a monograph. Previous volumes already mentioned in these columns have taken up bacterial diseases; non-bacterial fungus infections; the mycoses; diseases of doubtful etiology; diseases caused by protozoa; chemical and organic agents; deficiency diseases; diseases of metabolism, and diseases of the digestive system.

THE SIGNIFICANCE OF THE PHYSICAL CONSTITUTION IN MENTAL DISEASE. By F. I. Wertheimer, Associate in Psychiatry Henry Phipps Psychiatric Clinic, Johns Hopkins Hospital and Florence E. Hesketh Charlton, Fellow in Medicine, Johns Hopkins University. Cloth. Pp. 87. Price $2.50. Baltimore: The Williams & Wilkins Company, 1926.

An interesting monograph dealing with the classification of anatomical types in relation to mental disease. The studies in the book help to revive interest in the significance of the physical constitution in its relation to health and disease, which interest was overshadowed for a time by the great general interest in bacteriology, but which seems to be coming to the front again.

PLAYING WITH CLAY. By Ida W. Wheeler, Teacher of Industrial Arts. Illustrated by Elizabeth Tyler Wolcott. Cloth. Pp. 116. Price $2. New York: The Macmillan Company, 1927.

This very practical little manual for children's work in clay is brightened with just the kind of stories to keep the children interested and anxious to make the things it describes.

WHAT CHRIST MEANS TO ME. By Wilfred Thomason Grenfell, M.D. (Oxon.), C.M.G. Cloth. Pp. 82. Price $1.25. Boston and New York: Houghton Mifflin Co., 1927.

This unique and outstanding modern medical missionary, in a somewhat autobiographical series of stories, outlines the basis of his most practical Christianity.

OSTEOPATHY AND CHIROPRACTIC EXPLAINED: Being an Outline of the Science of Osteopathy, together with Observations on the Practice of Chiropractic or Spinal Adjustive Treatment. By L. C. Floyd McKeon, F.B.C.S., D.O., D.C., etc. Cloth. 97 pages. Price 2s 6d net. London: Lutterworth's, Ltd.

Better than the usual explanation of osteopathy as written by a chiropractor, though this author seems to have secured some history from the medics rather than from osteopathic sources. He insists that chiropractic is more scientific and keeps referring to it as "spinal adjustive treatment."

SEX EDUCATION: Education in Sexual Physiology and Hygiene. A Physician's Message, by Philip Zenner, A.M., M.D., Emeritus Professor of Neurology in the Medical Department of the University of Cincinnati. Cloth. 134 pages. Revised Edition. Price $1.50. New York: D. Appleton & Company, 1926.

Four straightforward health talks given to school children in a tenement district, one of them dealing with sex; two addresses to college boys on sexual physiology and hygiene and on social diseases. A sane discussion of the necessity for sex education, the importance of the parents' part in giving it, and the necessity, sometimes, for additional work at school.

BEHAVIORISM: By John B. Watson. Cloth. 251 pages. Price $3.00. New York: W. W. Norton & Company, Inc.

In this series of twelve lectures, published as one of Norton's popular "lectures-in-print" series, its leading interpreter sets forth the beliefs of that new school of psychology whose followers are known as Behaviorists, and some of the facts on which they base these views.

THE RELIGION CALLED BEHAVIORISM: By Dr. Louis Berman. Cloth. 153 pages. Price $1.75. New York: Boni & Liveright, 1927.

Dr. Berman says that "Behaviorism or Watsonianity was begotten by Darwinism out of the modern scientific spirit. The obstetrical attendant to the parturition was a man of genius and great personal force, John B. Watson." He attacks the principles of behaviorism not only for the "religious" qualities it has developed, but also in the light of important scientific discoveries, psychological and otherwise.

Current Medical Literature

HISTORICAL REVIEW OF THE CARE AND TREATMENT OF MENTAL DISEASES*

Mental disorder, in one form or another, has been recognized from time immemorial, but it is only in comparatively recent years that serious attempts have been made to study and understand it. Progress in this branch of medicine has been slow, but the difficulties to be contended with—professional apathy, public prejudice, and the inherent complexity of the subject—have been very great, and the advance which has actually taken place has not been sufficiently recognized. To give perspective to modern psychiatric problems, therefore, we have thought it wise to mention some of the more important landmarks in the social history of psychiatry.

Writers on the history of psychiatry have habitually referred to records in Greek poetry and mythology of episodes of frenzy affecting the heroes, but it is quite impossible at this date to form a definite opinion of the relationship of these states to mental disorder as it is understood today. Early Egyptian papyri contain references to mental disturbances. Thus, about 1500 B. C., it was written of senility that "The heart grows heavy, and remembers not yesterday." This statement may have had a basis, even at that time, in anatomical as well as in psychological observations; Elliot Smith has demonstrated arteriosclerosis in his dissections of mummies. The first authentic cases of mental disorder are recorded in the Books of the Old Testament, where Saul, David and Nebuchadnezzar are famous examples. Epilepsy was the type of mental illness with which the ancients were specially familiar. It was long known to them as the "sacred disease," but Hippocrates, with his customary insight, stated that "The sacred disease (epilepsy) appears to me to be nowise more divine nor more sacred than other diseases, but has a natural cause from which it originates, like other affections. Men regard its nature and cause as divine from ignorance, and wonder because it is not like other diseases." Cambyses, the King of Persia, is a much-quoted example.

An early reference, perhaps the first, to the treatment of the insane is contained in Plato's *Republic* (Bk. xi. c. 13). "If anyone is insane let him not be seen openly in the city, but let the relatives of such a person watch over him at home in the best manner they know of, and if they are negligent let them pay a fine." In the time of Hippocrates, it was the custom for the mentally afflicted to visit the temple of Æsculapius, where sacrifice and prayer were offered. Incantations and purifications seem to have been specially recommended for epilepsy. Hippocrates himself, however, believed that the brain was the organ of mind, and he denied that there was anything occult or mysterious about the occurrence of a mental disorder. Democritus, in his correspondence with Hippocrates, made the curious statement that "Hellebore when given to the sane pours darkness over the mind, but to the insane is very profitable." Hemorrhoids and varicose veins were alleged to relieve a disturbed mind. The treatment attributed traditionally to Asclepiades (who flourished in the first century B. C.) was later described in the Christian era by Celsus, who advocated two widely divergent methods. On the one hand, he had a use for such methods as starving, chains, flogging; because under such treatment, it was said, those who had refused food started to eat, and in certain cases the memory was refreshed. On the other hand, he deprecated venesection and the use of fomentations of poppy and hyoscyamus, maintaining that everything possible should be done to divert the melancholic, and commenting favorably on sports, music, reading aloud, rocking in a hammock, and the sound of a waterfall as methods of treatment. Themison, another disciple of Asclepiades, recommended a liberal diet, baths, and fomentations. Titus has the invidious distinction of recommending stripes. Cœlius Aurelianus is worthy of much praise, for he placed his patients under the best conditions of light, temperature and quiet, and recommended that everything of an exciting character should be excluded. Of particular interest are his references to tactfulness in attendants for the avoidance of antagonism, and to the limited and cautious use of physical restraint. The physician, he said, should not see the patient too frequently, lest his authority be undermined. Theatricals, entertainments, riding, walking and work were all recommended, particularly during the period of convalescence. Topics of conversation were to be such as would suit the patient's condition. Later, excursions by land and water, and various other distractions were to be used. He denounced semi-starvation, bleeding, chains, and excessive drug therapy. Galen, basing his treatment on the humoral pathology, recommended a just balance between "moisture" and "dryness." Aretæus, probably a contemporary of Galen, advised bleeding to relieve the liver in melancholy, purging by means of aloes, and baths; and, in convalescence, natural hot baths for their sulphur and bitumen.

Mediæval Europe left the treatment of mental illness to priests, and superstitious beliefs in witchcraft and the like flourished. Special reference may be made to contemporary customs in the British Isles. Treatment by herbs, and binding in chains and fetters are mentioned in old Saxon chronicles. Certain wells were considered to have special virtue. Of these, the most famous were St. Fillans, St. Ronans, Strathill, and a well on a small island on Loch Maree, in Scotland; St. Winifred's Well in Wales; and some in England, particularly in Cornwall. The Valley of Glen-na-Galt in Ireland had more than a local reputation.

Lunacy legislation appeared in England as early as 1320, in Edward II's reign, when it was enacted that the property of lunatics should be vested in the Crown. The first place of care for the insane in the British Isles was Bethlem in London, where in the year 1403 six lunatics were confined. In 1546, Henry VIII granted St. Bartholomew's Hospital and Bethlem to the laity, and in 1632 a medical man, Crookes, was appointed governor of Bethlem.

In the seventeenth century, the great Sydenham prescribed for "mania" after long agues a cordial, generous indeed, consisting of Venice treacle (which contained the flesh and blood of vipers, and sixty-one more ingredients), canary wine and honey. This was given three times a day, with rest in bed; even pregnancy was no contraindication. In addition, Sydenham strongly recommended bleeding in the treatment of "mania," saying, "Young subjects, if of a sanguine habit, are to be bled to the extent of nine ounces on two or three occasions, with three days between each bleeding." A caution was given not to exceed this amount of bleeding; "otherwise idiocy and not recovery will result." The bleeding was followed by a course of purgative pills. In place of venesection, Denis, of Paris, in 1667, introduced the transfusion of blood. This he employed in the case of a love-sick youth, with fatal results, and an action for damages followed.

In the next century, great indignation was aroused throughout the British Isles by the treatment meted out to King George III, who was subject to periodic attacks of mania. The treatment of his case was largely left in the hands of a Dr. Willis, who had gained considerable

*Reprinted from "A Textbook of Psychiatry," Henderson & Gillespie. This book will be reviewed in an early issue of The Journal.

reputation by his management of a private house in Lincolnshire, where he cared for approximately twenty patients. In conducting this private home, he allowed maniacal patients much freedom. If they escaped, the wages of the delinquent attendant were withheld until the patient returned. The Royal patient was treated with singularly little respect. No hesitation was evinced in knocking him down. He had to submit to blisters and a straight-jacket. Willis ascribed great value in the King's case to the use of Peruvian bark. There was so much friction between the various physicians who were called to see the King that the House of Lords appointed a Committee to inquire into the matter. It was following this that greater public attention was directed to the condition of the insane throughout the country.

The modern era of the care and treatment of mental illness dates from the end of the eighteenth century, and may be divided into three periods:

1. The period of humane reform, with which are associated the names of Pinel and Esquirol in France, Tuke in England, Fricke in Germany, and Morgagni, Ciarugi and Daguin in Italy.

2. The introduction of non-restraint by Gardiner Hill, Charlesworth and Connolly in England, and in America by Bond, Kirkbride and Rush.

3. The hospital period.

These periods will be dealt with in order, although they necessarily overlap.

HUMANE REFORM

In 1792 Pinel, who was physician to the Bicetre Hospital, was given a free hand by the Revolutionary Commune, and liberated in less than a week more than fifty patients, some of whom had been in chains for thirty years. He believed that these patients were unmanageable only because they had been robbed of air and liberty, and the results proved that he was right. He constructed promenades and workshops, and introduced light and air where before was the darkness and stench of dungeons.

His work was continued by his pupil Esquirol, who succeeded Pinel at the Salpétrière in 1810. Esquirol made great reforms in housing and regimen; traveled all over France to carry out Pinel's ideas; founded no less than ten asylums, and was the first lecturer on psychiatry.

After Esquirol came Ferrus, who received the new title, "Inspecteur-Général du Service des Aliénés." He had the distinction of starting a farm in connection with the Bicêtre, employing only patients on it. From his advocacy resulted the law of 1838 for the establishment of new mental hospitals in every department of France, and the improvement of the existing ones.

Almost simultaneously with these epoch-making reforms in France, the exertions of William Tuke and Lindley Murray in England resulted in the opening of the York Retreat in 1796.

In Germany, the modern era began with Fricke, who in Brunswick in 1793 applied humane medical treatment and greatly reduced mechanical restraint. In 1803, Reil published a volume entitled *Rhapsodies on the Use of Psychic Treatment in Mental Disorder,* and in 1805 appeared the first journal devoted to the study of mental disorders—the *Magazin fur Nervenheilkunde* —, which was edited by Reil and Kayssler.

The reforms begun in England by Tuke, which resulted in the establishment of the York Retreat, were followed by the introduction of a Bill into Parliament for the better treatment of the insane. This Act, known as "Wynne's Act," was introduced in 1808, and is described as "an Act for the better care and maintenance of lunatics being paupers or criminals in England." Amending Acts were introduced in 1811, 1815, 1819 and 1824, and these have laid the basis for the present lunacy administration of this country. It was not, however, until 1845 that a Lunacy Commission was established in England, and, in 1913, was reorganized as the Board of Control. In 1815, a Committee was appointed to investigate the conditions in "madhouses" in England. The Report of this Committee stated that keepers of houses for the insane admitted a greater number of persons than they were calculated for, there was an insufficient staff, a larger amount of restraint was used than was otherwise necessary, noisy patients were mixed with quiet ones, the certificates on which the patients were received were insufficient, and the visitation of private madhouses was defective. No immediate action followed this Report, but it served the purpose of drawing attention to the grave abuses which existed. For instance, at the York Lunatic Asylum it was found that there had been great neglect and cruelty. Of 365 patients who had died, only 221 had been reported; a patient had been killed, and the body disposed of to avoid an inquest; and two sets of books had been kept. At this time, when Dr. Monro, the Superintendent of Bethlem, was questioned about the treatment, he replied. "Patients are ordered to be bled about the latter end of May, according to the weather. After they have been bled, they take vomits once a week for a certain number of weeks. After that, we purge the patients. That has been the practice invariably for years, long before my time." It is true there were no strait-jackets—irons were held in greater esteem! Patients were chained in a state of nudity to tables. A female patient in a hospital at Bethnal Green was confined in a quondam pig-sty. Male attendants not infrequently had charge of female wards, and the immorality and depravity which existed beggar description.

It was not until 1828 that a Bill was passed which appointed fifteen Commissioners for the Metropolitan District to visit Homes in which the insane were detained. Patients were not to be admitted into them without medical certification, and all admissions, removals and deaths were to be reported to the Commissioners.

In America, the humanization of conditions in mental hospitals was associated with the names of Doctors Bond, Kirkbride and Rush, and the reforms instituted there were in line with what was happening in France and England. The otherwise enlightened Rush published a book called *Observations on the Diseases of the Mind,* in which he advocated copious bleeding, low diet, purges, calomel and opium, but these methods were discarded by his successors, and "supporting treatment" was generally favored.

ABOLITION OF RESTRAINT

This period was initiated in 1837 by Gardiner Hill and Charlesworth at the Lincoln Asylum. In 1829, in the Lincoln Asylum, there were 72 patients. Of these, 39 were constantly restrained, and the total number of hours of restraint was 20,424 per annum. Under the regime of

Hill and Charlesworth, of 130 patients only 2 were under restraint for a total period of twenty-eight hours per annum. In subsequent years, mechanical restraint was entirely abolished. The condition of the patients was greatly improved, they became quieter, and accidents and suicides were much less frequent. Connolly at Hanwell became an enthusiastic advocate of non-restraint, and after a period of five years he wrote in one of his reports: "There is no asylum in the world in which all mechanical restraints may not be abolished, not only with perfect safety, but with incalculable advantage." The *Edinburgh Review* of 1870 commented on Connolly's work in this way: "To Connolly belongs a still higher crown, not merely for his courage in carrying out a beneficent conception on a large scale and in a conspicuous theater, but for his genius in extending it. To him, hobbles and chains, handcuffs and muffs were but material impediments that merely confined the limbs; to get rid of these he spent the best years of his life; but beyond these mechanical fetters he saw there was a hundred fetters to the spirit, which human sympathy, courage and time only could remove."

Perhaps the most striking personality among all the pioneers was Dorothea Lynde Dix. This remarkable woman, handicapped as she was by unsatisfactory home conditions and by poor physical health, nevertheless showed indefatigable energy in investigating the care and treatment of the mentally disordered. In America, she was responsible for improving the condition of the existing hospitals and for creating new ones. Altogether she founded approximately thirty-two institutions. "Could all the prisons on new and better plans she carried bills for, and all the almshouses she caused to be thoroughly reconstructed be added to these, and then all brought vividly before the mind's eye, the impression would be amazing indeed." While in a state of ill-health, Miss Dix paid a visit to Scotland, and visited a number of mental hospitals in and around Edinburgh. Many of these she found to be well conducted, but in others she discovered serious abuses. She met with great opposition for the appointment of a Royal Commission to inquire into the condition of lunatic asylums in Scotland and the existing state of the law of that country in reference to lunatics and lunatic asylums. This Commission was appointed on April 3, 1855, and it was largely as a result of its investigations that parochial institutions for the care and treatment of the insane were established in Scotland. She thus accomplished in a few months what others had tried in vain to do for years.

Owing to the lack of suitable institutions for the care and treatment of mental cases, a system of colony care arose, and this colony system has met with considerable success. Particular attention should be directed to the colonies of Gheel and Lierneux in Belgium, to the colony established by the brothers Libatte at Clairmont (Oise), twenty miles from Paris, and also colonies in Hanover and Moravia. The most famous of these colonies is the one at Gheel. The daughter of an Irish king, called Dymphna, fled there and was murdered by her father. Some mentally afflicted persons who witnessed this crime were stated to have recovered their health. A legend quickly grew in that superstitious age, and pilgrimages were organized for the mentally sick. Many of the pilgrims remained to live among the inhabitants, and so formed the first "colony." The colony is largely agricultural, and at the present time, among a population of approximately fifteen thousand, there are some 1,500 certified mental patients, who are boarded and cared for in private households. Under this system the patient lives as one of the family, and has no restrictions placed upon his freedom, except that he must be home by eight o'clock in the summer and four o'clock in the winter, and is not alowed to enter an inn, or be served with alcohol, without special permission. The patient, in the first place, is admitted to a central observation hospital, from which he is sent to a family where he is likely to be suitably looked after. The features about this system which are particularly important are: the personal liberty, the economy, the humanizing influence of association with sane people, the influence for recovery, and the fact that the patient is treated as an individual.

In Scotland, a closely associated form of treatment called the "boarding-out system" has been in use ever since the middle of last century. This system is somewhat different from that which exists at Gheel, owing to the fact that the patients boarded out are not segregated in one colony, but are scattered throughout the country over a wide area. This sysem is particularly applicable to congenital cases and to harmless, demented patients, but there are certain drawbacks in connection with it, which need not be elaborated here. The natural consequences of the humanization of the care of mental patients, the abolition of restraint, and the provision of increased accommodation has been the disappearance of the shades of the prison-house, and the appearance of the hospital atmosphere.

THE HOSPITAL PERIOD

In modern times the administration of mental hospitals has been steadily improved, and, although we would point out that we do not consider it will ever be possible to use them as general hospitals are used, yet in their actual management, and in their medical equipment, a good attempt is being made to approach general hospital standards. This has been done with a view to developing the curative side of the treatment of mental illness, and, at the same time, engendering a better public attitude towards such hospitals. At the time when the "non-restraint" period came into being, a system of seclusion was substituted, which consisted of treatment in single rooms, often with locked doors, and in padded rooms. This system of single-room treatment is gradually and steadily falling into disuse, and advance rendered possible by increasing both the medical and the nursing staff. In addition to improving the quantity of the personnel, the quality has been improved. This is indirectly due to the employment of female nurses in the male wards, and to having general hospital trained matrons at the head of the nursing staffs of mental hospitals. The credit should be given in the first place to Dr. Samuel Hitch, who founded the Medico-Psychological Association, and in the same year (1841) introduced female nursing of male patients into the Gloucester General Lunatic Asylum. Dr. Hitch employed the wives of his married charge-attendants to help their husbands in the male wards. Dr. Campbell Clark was the first to appoint a trained hospital nurse to the post of matron (1880), and in the following year he commenced the systematic training of asylum nurses and attendants, and was responsible for the *Handbook for*

Attendants on the Insane, which has now been greatly elaborated, but is still used as the official text-book for the examinations of the Medico-Psychological Association. Clouston, Turnbull of Kinross and Robertson have all done much to foster the hospital spirit by the introduction of female nurses in the male wards, and the practice of employing hospital trained nurses has been adopted not only in Scotland, but also in England and in America. This system has been instrumental in bettering the care of mental hospital patients, and has undoubtedly tended to foster the hospital spirit. As a matter of experience, it can be said that male patients in a mental hospital for the most part prefer women nurses, and are usually much less troublesome and less excitable when under their care than when under the care of male attendants. We are well aware, however, that male nurses are an absolutely essential part of any mental hospital, because there are always a certain number of male patients who cannot possibly be cared for by women nurses. In addition to improving nursing conditions by day, the night staffs of mental hospitals have been increased to a great extent. It is no longer a question of locked doors or padded rooms. In every modern mental hospital difficult patients should be under observation not only by day but by night. This can be accomplished (and is being accomplished) by more adequate subdivision of patients than heretofore. It is necessary that the mental hospital should be provided with admission wards, wards for acute cases, for hospital cases, and for those who need continued care.

Medical students are now getting a more comprehensive course of instruction in mental disorders, the introduction of the Diploma in Psychological Medicine having helped to create a standard; while from the nursing standpoint, the Medico-Psychological Association has done excellent work by its examinations. It is hoped that the standard of nursing will be further raised by the fact that all nursing is now being brought under the General Nursing Council.

While it is important that everything possible should be done from the medical, nursing, laboratory and occupational points of view to make the mental hospital in every sense a place where sick people can be nursed and satisfactorily looked after, we believe that this period of modern care should concern itself especially with prevention. Every effort should be devoted to building up a system of psychiatric clinics, with accommodation for from 60 to 100 patients, with outdoor departments in connection with general hospitals, and with the provision of a social service departmen, so that after-care can be properly organized and carried out. We consider that the closer the connection between such a psychiatric clinic and the general hospital, the better; although we do not believe that it is advisable to treat mental patients in the wards of a general hospital. The psychiatric clinic should, however, be an integral part of the latter. Mental illness is thus put on a similar footing to physical illness, and the patient can have the advantage of intensive study by experts in general medicine. The general medical staff are benefited educationally by such an arrangement. Experience has already demonstrated the truth of these views in America and the Continent.

Close connection should also be established between the clinic and education authorities, welfare and charitable societies, the courts and employers of labor.

GENERAL PSYCHOPATHOLOGY*

(1) Instinctive development.
(2) Environmental influences.
(3) Mechanisms relating (1) and (2).
(4) Symptom formation.

Mental development occurs in response to the needs of adaptation. The mind grows in complexity as the necessary adaptations multiply. The adult mind is far more complex than that of the child; the European's more complex than that of the native of Borneo. Adaptation implies originally conflict, the conflict in human beings between certain forces inborn in them and the environmental circumstances. It will be convenient, therefore, to consider mental development under three heads: (1) The nature and working of the inborn forces, (2) the nature of the environmental influences, and (3) the methods and means of mental adjustments between them. The discussion of the genesis of symptoms (maladjustments) will then be possible.

(1) The inborn forces are commonly called *"instincts"*. They are primary data, being given in the innate equipment of the organism. A common confusion occurs in failing to distinguish between instincts in this sense, and the innate paths or patterns which they utilise for their expression, and which are probably fewer in man than in any other animal. The prevailing instinctive forces, however, are the same in man and animals. There are probably only two, *nutrition* and *sex*. Some add a third—the so-called *"herd* instinct". At birth in man the instincts have but few patterns of expression, but these multiply (under environmental influences) as the age of the individual increases, so that there are two varieties of pattern of instinctive expression—inherited and acquired. It is in the number and complexity of his acquired patterns that man surpasses the lower animals. Some of the patterns which are actually inherited do not mature till after birth—the myelinisation of the brain is not complete. The patterns of expression of the nutritional instinct are adequate from the beginning (although they continually multiply), while those for sex are much less developed, and do not begin to approach completion till puberty is reached. The process of unhindered satisfaction of an instinct—*i.e.* where the reaction-patterns are in full play—is accompanied by a conscious feeling of pleasure, and frustration of the process by unpleasure—a kind of pain. In early life all the activities of the organism are directed immediately towards the attainment of pleasure. The organism follows the so-called *pleasure-principle*. Later, the increasing demands of reality make necessary a postponement of pleasurable attainment until certain mediate conditions have been fulfilled—this has been described as obedience to the *"reality-principle"*. Instincts are in themselves not conscious, but the feelings that accompany their processes of satisfaction or frustration are conscious. The nutritional instinct attains satisfaction fairly readily from birth onwards, although not without repeated and increasing effort on the part of the organism. The sexual instinct is much more commonly frustrated. The conscious expression of an instinct seeking satisfaction is a *wish* or desire. This wish or desire by virtue of the representative-imaginative function of consciousness can have a definite conscious *object,* through which the general *aim* of the instinct can be fulfilled. The sexual instinct has a development peculiarly its own, in that its object normally changes at various stages of life although its general aim remains the same (Freud). First of all it attains satisfaction in the body of the individual himself—the *autoerotic* stage. In this autoerotic stage, satisfaction giving a pleasurable feeling akin to sexual pleasure is attainable by stimulation of almost any part of the body surface, but espe-

*Chap. vi; "Text-book of Psychiatry."

cially of certain *ertogenic* zones (mouth, anus, etc.). Thus, for example, stimulation of the mouth area is associated with pleasurable sensuous feeling—an association which persists in adult life. Similarly stimulation of the zone of the anus is at least in some individuals associated with pleasurable feeling, and this persists in adult life in a few of them as "anal erotism." In the later stages of development of the sexual instinct, these regions usually lose most or all of their pleasure-giving possibilities, which are now largely confined to the zone of the genitals. In the second or *homosexual* stage, the object of the sexual instinct becomes another individual, but of the same sex and in the third or *heterosexual* stage, of the opposite sex. This is probably the normal development. But it may be arrested ("fixated" is the technical term) at any stage—one of the erotogenic zones may continue to afford sensual pleasure to as great an extent, or greater, than the genital zone; or the development with reference to the object may not go beyond the autoerotic or homosexual stage. Further, "bisexuality" has to be taken into account. The individual's sexual instinct is capable of expression and satisfaction in two opposite ways—with the individual as active or the individual as passive. In either case the process of satisfaction gives pleasure, but in the passive role the general feeling-tone involves a certain amount of pain; while in the active role evidently a certain amount of the pleasurable feeling may be derived from the inflicting of pain on the sexual object. These are called respectively the "sadistic" or active and "masochistic" or passive part-expressions of the sexual instinct.

"Affect" or emotion arises in consciousness when an instinct is prevented from attaining easy complete satisfaction. Emotion and feeling-tone (pleasure and unpleasure) are not the same. Pleasure occurs during the process of satisfying an instinct; emotion probably only if there is some obstruction to the process of satisfaction. All emotions can be divided into two classes—those with a pleasant, and those with an unpleasant, feeling-tone, the latter occurring when obstruction is for the moment complete. As long as an instinct is for the time being completely satisfied, pleasure and emotion alike disappear.

Consciousness (sensations, feelings, emotions, wishes or desires and ideas) arises when instincts, themselves unconscious, are in action, requiring certain complicated adaptations to the environment for the satisfaction of the instinct. Consciousness is not an otiose creation. It has a function, the representative-imaginative function, especially when satisfaction has to be delayed in accordance with the so-called "reality principle," in facilitating the satisfaction of instinctive needs. The instinct is represented in consciousness by a wish, and its object by an image. The wish and the image are in some way associated by a tension (Driesch) furnished by the instinct, and this tension brings about the motor adjustment necessary for the fulfilment of the wish (satisfaction of the instinct).

In the course of the individual's experience, certain mental events have a peculiar intimacy; such events become welded together to form the *ego* or self. Another group of mental events are attributed to the environment—"projection" is the attributing of subjective impressions to external causes. But their conscious representations form part of the experience of the self. Mental events are retained (memory), but do not exist or persist in consciousness unless they continue to minister to an instinctive need, directly or indirectly. They are said to become *"unconscious"*. Thus one's knowledge of French, say, remains unconscious while one is talking English. Although the content of consciousness is small at any moment of time, previous conscious events, being retained (memory), can be revived (recollection or recall). Many of these revivable unconscious events have had the peculiar intimacy mentioned and have been incorporated in the ego; hence the ego or self is composed of certain conscious facts of the moment together with a great many revivable mental events. The latter are, at any moment of time, for the most part unconscious, *i.e.* not conscious. "Preconscious" is the term often used for this easily accessible type of unconscious fact.

But there is another type of unconscious fact — one which has proved distasteful to the ego and has been disowned ("repressed") by it. Such facts may be forgotten in an apparently ordinary way ("suppressed"—Rivers) or deliberately blocked out of consciousness ("repression").

These together form the "repressed unconscious". The repression and suppression are done largely by the ego, which is an environmental (herd) product in part. When the ego rejects something—refuses to identify some experience as part of the self—it is said to exercise a *censorship*. This censorship is partially identifiable with "conscience" commonly so called: but not all the facts excluded by conscience are as thoroughly disowned. Repression is peculiarly liable to affect the conscious representations of the sexual-instinct. Hence a large part of the repressed has a sexual connotation.

Strictly speaking, "unconscious" feelings, emotions, wishes and ideas are a contradiction in terms. But particular aspects of the instincts of which feelings, etc., are the conscious representations can persist in an "unconscious" form. The term "unconscious" is itself a bad one, since it defines something in terms of what it is not.

That part of the individual's unconscious which is inherited, including the "instinctive" part, has been called the racial unconscious (Jung).

The inherited and acquired possibilities of reaction—the instinctive reaction-patterns—have something associated with them (something designated above, instinctive forces), which converts them from mere possibilities of reaction to actual functioning elements, and the reactions they subserve must occur if life is to be sustained at all. The something which forces these patterns into action it is usual to regard as analogous to the "energy" of physics. This psychical "energy," if we may call it so for brevity, is commonly labelled "libido" (Jung's term). The *libido* is regarded as being at the disposal of any reaction which subserves the instinct. It is to a certain extent transferable from one reaction to another. When it is transferred from the service of a reaction which fulfills the ordinary instinctive aim more or less closely to one which fulfills that aim in a less direct way, the libido is said to take part in a reaction of "sublimation" of the instinct. In early life, as we have seen, instinctive satisfaction is largely obtained from the individual's own body. The libido at the service of the instincts is then pictured as directed inwards—the autoerotic direction of the libido. As development proceeds, instinctive satisfaction is obtained increasingly from without; and the libido is directed to external objects. The libido is then said to expend itself partly in keeping the mental representation of these objects in consciousness: it is "attached" to these mental representations and is spoken of as "object-libido." By this time self is not only a succession of experiences with a common feeling of intimacy: it is a developed concept. That portion of the libido supposed to be attached to the concept of the self is called "egolibido." Sometimes it happens that very little of the total libido is attached to object-representations, and most to the concept of the self. Exclusive attachment of libido to the concept of the self is called "narcissism," an extreme variety of selfishness. "Regression" is the return to an earlier stage of development of the individual personality, and in the language of the libido-theory, consists in a

withdrawal of libido from objects and a concentration of it upon the self.

Fantasy.—We have seen that an important mental function is the conscious representation of an object or end with which a desire is associated. The occurrence of this conscious representation creates a state of tension (furnished by the instincts whose end is the conscious representation) which issues in bodily activities adequate to attain the desired end. Sometimes, however, these activities are not permitted to take place, and satisfaction of the instinct does not then occur. But in such an event the representation sometimes continues to be held in consciousness, and even to be elaborated, the libido which should have actuated the necessary bodily movements dissipating itself instead in the elaborative process. This is the development of phantasy and the achievement of phantastic wish-fulfilment at the expense of application of energy and activity to reality—at the cost, in other words, of adaptation to reality. It is a triumph of the pleasure- over the reality-principle, and the state of conscious preoccupation with phantasy is called *introversion*, to distinguish it from the normal adaptation, which is the direction of the energy or libido outwards to reality *(extroversion)*.

Phantasy is an important part of normal mental life, and it can serve a useful purpose if kept in sufficiently close conformity with reality to form the basis of a scheme of future action. Ambition, for example, is a phantasy, and is pathological only if real striving is abandoned for indulgence in the phantasy alone. The child's formulations of reality are phantastic in nature. His father is a great man, his mother the personification of goodness. He may identify himself with these *imagines* very closely (for they are embellished concepts and not in strict conformity with reality), and when these illusions which lapse more or less into unconsciousness are encroached upon in later life by contact with reality, he will feel the encroachment keenly, although unconscious of the source of this feeling, since the source has lapsed long ago into the unconscious. The resulting emotional perturbation leads to much thinking—an obsessive preoccupation, which is really an attempt to reconcile the real with the unconscious ideal. Since the motivation of this continued thinking is unconscious, the thinking appears in consciousness as a "symptom" and forms one type of the obsessive-ruminative psychoneuroses (*q.v.* in Ch. "Psychoneuroses"). (MacCurdy).

THE ENVIRONMENTAL INFLUENCES

In early infantile life the child remains in the closest association with the mother. The child being still in the primary undifferentiated phase of consciousness (Burrow), the associations of the earliest days are entirely subjective, *i.e.*, there is at this stage no objectivation, no differentiation of the mother from himself: and his interest follows the direction of his mother's interest—namely his own body. At this stage and later, his slightest gestures are followed by satisfaction of his instinctive nutritional needs—the stage of omnipotence (of "magic" gesture and "magic" words—Ferenczi). Soon, however, this primary subjective phase begins to pass, reality makes increasing demands on his consideration, and he has to conform increasingly to it if he would compass the satisfaction of his instincts. His consciousness increases in extent, and a distinction arises mentally between self and objective reality—his conscious experience is divided into self-consciousness and object consciousness. Both are experiences of the self, but the source of the second is projected. Object consciousness is at first a vague affair, the details of which are poorly differentiated among themselves. For example, objects are assumed to have a kind of organic connection with the persons to whom they belong—a connection which in later life is recognized not to exist. This stage of object-consciousness corresponds to one which primitive man never completely passes—the stage of sympathetic magic or participation. The most prominent objective facts for the child at this early stage are his parents, and so they become the objects towards which the libido is chiefly directed. But here a complication occurs, in that one parent becomes more important for the child than the other. Furthermore, each parent has a place in the interests of the other, as well as having a place for the child; and so the latter meets what is probably his first great environmental obstacle of a personal kind—his first rival—and the germs of hate may grow in association and contact with the group of emotions and feelings comprising the conscious expression designated love, of the sexual instinctive tendencies. Thus love and hate are said to begin that association which persists throughout life. Prohibitions and punishments also can produce a feeling of antagonism and play a part in the genesis of hateful emotion. The preference of the child is usually for the parent of the opposite sex, and this attachment is conventionally called the Œdipus situation or complex. The early identification with the preferred parent has a conscious formulation in the creation of an ideal to be like the parent. The ideal is the more or less unconscious *imago* already mentioned. The parent thus serves as an example to the child, and so unknowingly trains him in the formation of habits. Deliberate training begins with example and later proceeds with precept, in earlier days from the parents, and later from school influences and the influence of companions. Morbid reactions, as well as healthy ones, may be impressed in this way, and not only specific reactions but general attitudes with emotional components—*e.g.* morbid gloom or anxiety. Training also makes use not only of rewards but of punishment and threats of punishment. Punishment implies either the frustration of some conscious wish and the production of unpleasant emotion, or the infliction of actual pain of physical origin. There is no doubt that the inflicting of pain in some of the erotogenic zones may be accompanied by a certain amount of pleasurable feeling, and frequent arousal of pleasure in this way may cause a desire for it to become fixed. This desire may appear as a sexual perversion in later life, just as any other premature fixation of the sexual libido may appear as a perversion. Punishment in the form of threats is supposed to be particularly potent for subsequent morbidity if it concerns itself with threats of permanent deprivation of sexual satisfaction (by castration). When the primary parental stage of the environment begins to be less important, and the child's mental environment widens and his contacts with it increase in number and complexity, a group of tendencies come into play which have been included under the term "herd instinct". The use of this term connotes that certain reactions necessary for adaptation to society in general are inborn. It seems doubtful whether it is necessary to make this hypothesis, rather than to attribute the more primitive less differentiated reactions to the social milieu as reactions derived from personal contact with it. In any case, it is in connection with adaptation to the requirements of the herd that the ego-ideal is built up and that the most powerful repression is exercised.

THE MENTAL RELATIONS OF (1) AND (2)
(*i.e.* of the instinctive manifestations and environmental influences)

The infant, receiving its first sensory impressions, treats them in the beginning as part of itself—"introjects" them—they have a purely subjective reference. But from his motor activity and the different quality of sensations arising in his own body from those not so arising, he learns to differen-

tiate those of the external world and to attribute them to influences external to himself and less within his control—*i.e.* to "project" them. Not only does he do this with his sensations, but he projects also his emotions. The emotions he experiences in certain situations, *e.g.* in beholding anything large and new to him, he attributes to the thing itself, so that what fills him with awe has an awesome quality attributed to itself. Furthermore, all his projections are of the personal type; he endows external objects with all his own conscious properties. This is comparable to the stage of animism in primitive man.

Imitation of example, especially of parental example, is a training-method which is used early. It is one of the modes by which suggestion operates. *Suggestion* seems to depend on a particular relation of operator (suggester) and subject, analogous to but not identical with the active-passive relation in the play of the sexual instinct. Suggestion operates only in an effective relationship.

Intelligence is phylogenetically the last-developed of all the adaptive functions. It appears in rudimentary form in the highest apes, at least. Intelligence is said to grow in the individual till the age of sixteen. After that its apparent growth is mostly a matter of experience and consequently improved judgment. In the growth of intellectual processes which deal eventually with the adaptation of means to ends, not merely the end is consciously represented, but the means to it, and so *symbolisation* plays an important part.

Symbolisation consists in the conscious representation of experiences derived from the environment by something mental which *stands for* that experience. Language is made possible by symbolisation. For example, a certain sensory experience of roundness and depth and colour and consistency becomes represented by the vocalisation "ball". The word "symbolisation" has unfortunately attained many meanings. In ordinary life it has come to be especially used where some simple object has become endowed with great effective meaning, *e.g.* a country's flag as a symbol for patriotic feeling. A very similar one is now made of the term in psychopathology; but the object acting as a symbol is invested with a very strong personal affective meaning instead of a general one, as in the case of the flag. Symptoms are often symbolisations in this sense.

The association of one idea with another, or of an emotion or feeling with an idea, is an important adaptive function subserving both practical (real) and phantastic thinking. It works in a way analogous to the conditioning of reflexes in physiology, in that once a certain feeling has become associated with a certain idea, the revival of the idea (or, unlike the conditioned reflex, of some similar idea) may revive the feeling. For example, if an article of food has accidently been associated with a feeling of nausea, the same or a similar article may on a later occasion revive nausea simply by virtue of the previous accidental association.

Adaptation is not at all a matter of pure reason. It is eventually and at all times a matter of modifications of instinctive trends, which have a very much closer association with emotional than with intellectual processes. But wherever an adaptation is consciously made or results in conscious experience of some kind, an intellectual formation tends to occur, which by virtue of its conscious nature, contrasting with that of the instinctive reaction which is wholly unconscious or only indirectly conscious, is apt to masquerade as the reason for the particular adaptation. This substitution of an intellectual conscious "reason" for the actual instinct-derived (unconscious) basis of a reaction, is known as *rationalisation*. It is usually a formulation more closely in accord with herd or ego-ideal requirements than was the primary instinctive trend.

The gradual building-up of an ego or self has been stated to arise from a continuous synthesis of certain experiences having a peculiar intimacy, and at the same time a "not-self" or external world has been mentally constructed (represented). There is here a contrast, which results, among other things, in the formation within the experiences of the ego of an idealised representation of the self. This is compounded usually of traits observed in persons in the environment. It is a very gradual growth, and consequently not at all fully conscious at any time. It gives rise to an important subservient reaction, in that where the attributes of the self are conceived as lacking in some of the qualities of the ideal self, the self makes an attempt to *compensate* in one direction what is lacking in another. These deficiencies which it is attempted to compensate may be of either physical or intellectual attributes.

The more intimate part of the environment constituted by the body has important relations to the mind. In the first place, the mental representations of bodily activities are regarded as part of the self. Secondly, mental events (ideas) are followed by bodily (physical) events in so regular and invariable a way that a relationship of cause and effect is universally assumed to exist, and the relationship is called a process of "will." Thirdly, mental events which have an emotional accompaniment have a bodily reverberation also, not in the form of directly adaptive movement as in the case of "willed" sequences, but in the form of disturbances of function of a special kind, especially visceral disturbances, but involving also movement of the limbs of an apparently useless sort, *e.g.* tremors. Fourthly, most visceral functions go on without any conscious accompaniment, and the intervention of conscious accompaniment usually betokens malfunction. Conversely, in the absence of spontaneous malfunction conscious attention to the working of the viscera tends to derange the latter. Attention alone would not do so, but such attention is usually accompanied by emotion (usually anxiety), which has visceral reverberations. Attention of this sort arises only when the normal direction of the libido towards the environment is frustrated and turns towards the self. Frustration of any instinct causes emotion of some kind, emotion produces palpitation, etc.; palpitation draws the attention, already failing to find an environmental object, and a vicious circle is set up, since attention makes the palpitation, etc., loom larger, and so the emotion increases.

For the individual the combined result of the innate endowment, of the environmental impressions, and of the reactive-tendencies arising out of the conflict between them, is what is customarily called the *personality*. This is a more or less completely synthesised group of reactive-tendencies, including not only all these that the ego acknowledges as its own, but some of which it is unaware, *i.e.* unconscious but not repressed tendencies. Certain mannerisms are a simple example of this latter class of components of the personality. No two individuals ever have exactly the same history, from the zygote stage onwards, and so no two personalities are exactly alike. But there are certain general types, representing different types of adaptation. Some of these are more successful than others, reality being more adequately dealt with. Those personalities that are less successful are *ipso facto* apt to develop substitutive reactions (Meyer) for healthy ones, *i.e.* to have symptoms of mental illness.

THE PRODUCTION OF SYMPTOMS

The very important part played by unconscious factors in normal conscious mental life has already been emphasised. Normally the unconscious factors cooperate harmoniously in facilitating conscious reactions. But in some cases the unconscious factors break through indirectly (symbolically in

the second sense given above) into consciousness in a manner out of harmony with the conscious mental life of the individual; in other cases, the unconscious factors usurp the whole realm of consciousness (dreams and dual personalities, for example). In either instance, symptoms of mental disorder become apparent. It is obvious that to do this the unconscious factors must have an activity that is independent of consciousness; they are said to be *dissociated* from the rest of the mental content, and the field of consciousness to be "restricted" with regard to them. This lack of connection between conscious and unconscious may result either from a simple failure on the part of the conscious to recognise a connection, or it may be due to a refusal of the conscious ego to do so ("repression").

The first case (of simple failure of recognition) is not at all uncommon. A patient may have a great deal of emotional perturbation which is associated with visceral disturbance. The latter attracts his attention, and as its subjective accompaniments (symptoms) are the same as those of some organic disease, and as he fails to recognise their connection with emotion, he concludes that he has that disease. Then because affects are easily displaceable from one idea to another the emotional perturbation which originally arose from other factors becomes attached to the idea of disease—and in this way an anxiety state is set up.

In the second instance, where the dissociation depends on repression (the result of conflict of the repressed material and the ego ideal), the dissociated (conscious) material has had originally a strong affective accompaniment. The formation of a symptom denotes a partial or complete failure of the ego to repress the affectively accompanied material ("complex"), the degree of failure being proportional to the directness of expression of the latter. The symptom may take a bodily (physical) form: in the motor field, a muscular movement (tremor, tic) or a paralysis; in the sensory field, an anæsthesia or amblyopia, or some other sensory disturbance. The particular form is a matter of minor determinants. In other instances the symptom may have a psychic form—a fear or an idea, either being apparently meaningless for consciousness. The commonest conscious emotional symptom is "fear" in the special form of distressful apprehension usually designated "anxiety". Frustration of any instinctive trend, whether self-preservation or sexual, may lead to anxiety. The anxiety tends to attach itself to an idea, since affects can hardly remain unrelated in consciousness. This idea to which the anxiety attaches is apt to be one consciously very far removed from ideas associated with originally repressed material—this is the so-called "displacement of affect". Whatever the idea to which the affect (of anxiety) attaches, an attempt may be made to ward off the anxiety in a way reminiscent of the magic acts of infancy. Thus a schoolboy had to touch everything twice in case he should not pass a forthcoming examination. This is the genesis of some compulsive acts—a wish, a fear and a magic act to overcome the fear. A similar mechanism accounts for certain obsessive ideas (magic words).

Another fashion in which the ego may deal with an imperfectly repressed complex (of idea plus emotion) is by *projection*. The complex material is permitted to appear in consciousness but projected as external reality, so forming a delusion (*e.g.* a belief that other people are watching the patient wherever he goes), or as a hallucination (*e.g.* a voice accusing him of vile practices). The method of projection is more seriously pathological than the preceding modes, since it involves a distortion of reality.

The projected complexes are often considerably elaborated, being originally the phantasy-formations already mentioned. Phantasies may, however, appear directly as part of the conscious ego, instead of being projected, in one of two ways: (*a*) either the phantasy is not one involving the emotions of guilt or other emotions such as would cause the ego to disown it; for example, a delusion of grandeur may involve simply a turning away of the ego-libido from reality to phantasy; or (*b*) the ego-ideal is so disintegrated that repression is not exercised at all, and any complex which involves material, no matter how distasteful originally to the ego, is admitted into consciousness. This occurs only in the most serious forms of illness, *e.g.* in dementia præcox and epileptic dementia.

Frank conscious indulgence in wish-fulfilling phantasies when disintegration of the ego is not too profound, is accompanied by the appropriate affect, viz. elation. In many patients in whom elation occurs there is, however, little conscious evidence of a wish-fulfilment; and it appears that elation may also colour the consciousness while the wish-fulfilment associated with it remains unconscious but active (dissociated).

The emotional state which we are accustomed to consider as the psychological contrast to elation, namely depression, reaches pathological intensity in several ways. When a wish is not fulfilled—when frustration occurs—depression results. Depression is more likely to occur when the aim of the frustrated tendency is abandoned: anxiety when there is frustration with continued striving. This is a normal occurrence, but the depression attains pathological significance, magnitude and duration, (*a*) when the frustration occurs in relation to some conscious but very much overvalued end, the depth of depression being proportional to the degree of overvaluation. Overvaluation of the end is common in "neurotics", especially as this overvaluation is derived from an exaggerated ego-ideal. Hence the continual striving of neurotics (Adler's "masculine protest"). Depression is also pathological, (*b*) when the frustration is in relation to some unconscious object. In the latter instance the depression appears pathological because there is nothing in consciousness to account for it. Depression may also be the conscious accompaniment of a feeling of guilt or remorse, which itself may be derived from an unconscious trend imperfectly repressed. A conscious rationalisation of the feeling of guilt may be produced in the form of self-accusatory ideas, which may reach delusional intensity. Guilt is particularly apt to be felt in connection with sexual trends, on account of social prohibitions.

The methods of symptom-formation which have just been described are used in response to contemporary environmental influences, and do not imply any developmental defect hindering adaptation. But in some individuals the development of the libido's object-direction may be arrested at an intermediate stage (the autoerotic or the homosexual). This hinders adaptation to adult reality, which is heterosexual in organisation, and brings the individual into contact with social prohibitions, *e.g.* in fixation at the homosexual stage. If he accepts his homosexuality in a matter-of-fact way, no mental disorder results, but if he represses his tendencies from consciousness because of the socially induced feeling of guilt, and if the repression fails, depression or anxiety or projected wish-fulfillment occurs as a symptom.

Failure of adaptation at any level of development implies dissatisfaction. The individual may revert in phantasy to a previous level of development, *e.g.* the infantile stage of helplessness, and obtain a phantastic satisfaction which may be dramatised, *i.e.* the patient lies helplessly in bed, uttering baby-talk, and having to be fed. "Regression" is not an unimpeachable description of this state, since there is no recapitulation, and the reinstatement of the previous terms of existence is never an identical one.

All these reactions can be described as substitutions for healthy adaptations. Their general tendency is to lead the patient away from reality. Some are more pernicious in this respect than others; the further away from reality, the more symptomatically pronounced the mental disorder, and (on the whole) the worse the prognosis for recovery.

Physiotherapy

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THE PRACTICAL APPLICATION OF GALVANISM IN GYNECOLOGICAL THERAPY

Article VI

VAGINITIS

There are various ways to treat vaginitis from the standpoint of electrotherapy. However, as we are dealing with galvanism we will outline only a method in which it is used. The reader should bear in mind through all these papers that while a method is given for treatment, it does not necessarily mean that it is the best method in dealing with that condition from the standpoint of electrotherapy. We are simply outlining under each topic what may be done by the particular modality under discussion.

When there is an infection of the vagina, no matter what particular organism is responsible, zinc ionization is an effective method of dealing with the condition, provided a technic is used in which the ionized solution will reach the entire surface.

An electrode should be used which will occlude the vaginal orifice. The solution should be an isotonic zinc solution. Use a fountain syringe with elevation enough to keep the vaginal canal in distention. A useful electrode for the active work can be made of a rectal tube which has been perforated several times near the end, and in which a small wire coil is passed to the end. This tube can be completely surrounded at the end by some thin animal membrane that permits osmosis, and which can be distended to fit the canal. Another way is to use a pack within the vagina that has been saturated with zinc solution and then fix the electrode so that it is within the pack.

Connect the active electrode in the vagina to the positive pole and the negative to a large pad on the abdomen. Give as much current as the patient will stand. An average will be between 15 and 30 ma. of current for about 15 minutes. Always cleanse the vagina with douche or swab before treating.

VAGINISMUS

This troublesome condition may sometimes be very successfully combated by chlorine ionization. Insert into the vagina an electrode that has been covered with cotton or gauze which in turn has been saturated with a weak saline solution. Connect the vaginal electrode with the negative pole and the abdominal electrode or pad with the positive pole. Allow a very weak current of about 10 ma., at first, to pass; and gradually increase the current strength from day to day. Treat daily at first.

Fig. 1. Illustrating one of the reliable current generators on the market for electrotherapy. This particular machine is called the McIntosh Plysine Generator. There are several types of this machine and anyone interested would do well to get the latest data from the manufacturer.

INFANTILE UTERUS

One of the greatest causes of amenorrhea or of dysmenorrhea is to be found in infantile or undeveloped uteri. Dozens of cases of young women coming to the office suffering from dysmenorrhea are a common weekly occurrence. Examination discloses a small, infantile uterus, perhaps normally placed or partially or almost wholly retroverted. Here we have a combined pathology. We have lack of development and also malposition at the same time. Galvanism, better than any other modality is indicated in these cases as an adjunct to repositioning.

The uterus in these cases is in a state of undevelopment. The softening and relaxing effects of negative galvanism bring about a state of relaxation and dilation. Negative polar effects are those of increased blood supply, this in turn will supply the uterus with greater nourishment. Also, using the negative pole to dilate the narrow canal will often give relief of the symptomatology and clear up the painful dysmenorrhea. For the technic of the latter refer back to the heading "stenosis of the cervix." The technic of application for infantile uterus is as follows:

For the unmarried, employ the cutaneous methods, although the effects are not nearly as successful as the following technic for the married woman. Use a pad about 4x5 inches in size on the lower abdomen and connect it to the negative pole. The other pad should be about 5x8 placed under the sacrum, connected to the other pole. Use current of from 10 to 29 ma. and allow to pass for 20 to 30 minutes. Treat three times weekly.

For the married women use a carbon ball electrode within the vagina and connected to the negative pole. The other pole should pass to a pad on the lower abdomen. The current should be from 10 to 15 ma. and the average treatment should consume about 20 minutes.

Both technics should be followed by a surging sine wave, or surging sinusoidal current using the surface electrodes and as much current as necessary to get a contraction. Treat for about 10 minutes.

This treatment will clear up a vast majority of these cases and you will find that you are building up a practice that is founded on a large number of grateful patients. It might be well to remark that such therapy now will save operations in years to come.

Fig. 2. Copper ball vaginal electrode for use when it is desired to give treatments with copper phoresis. Electrodes of a similar shape but made of carbon may be had when it is desired to use the polar action of the current without the particular phoretic action of any metal.

CERVICAL EROSIONS

Copper phoresis is a very successful method of dealing with erosion of the os; however, it will not be permanent if there are exciting causes, as discharges from higher up which are allowed to go on. These discharges from the uterus or tubes are the principal causes of erosions of the os. However, it is good practice to treat the symptoms in these cases if the cause is also being taken care of.

An electrode with a copper face made to fit the os

is a very useful instrument. Such an electrode is shown in Figure 3. This electrode is placed in good contact with the eroded surface and it is also connected to the positive pole. The negative pole is an abdominal pad of about 4x6 inches. Allow from 10 to 20 ma. of current to flow for about ten minutes and repeat the treatment in 3 or 4 days. Before stopping the treatment always reverse the current for a minute in order to loosen the contact with the surface.

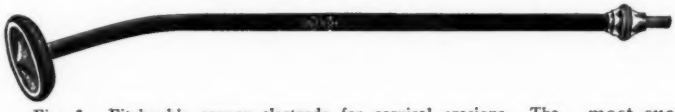

Fig. 3. Fitzhugh's copper electrode for cervical erosions. The disc at the end of the insulated stem is made of copper and shaped in such a way as to fit over the external os.

SUBINVOLUTION

These cases of large boggy uteri which do not return to normal after childbirth are very common. Many of them suffer a great deal from anemia due to a constant flow. It is no uncommon thing to meet instances where an electrode will pass into the uterus from five to eight inches.

Electrotherapy offers a means of definite and quick relief from this condition. Various technics are used. Some employ uterine electrodes, some just use a vaginal electrode and some work through rectal electrodes. If there is an associated constipation it is well to work through the rectal electrode. Or the treatment may be alternated, giving the current per rectum once and per vagina the next time, as we do not use the galvanic current from the standpoint of any phoretic action. We do use it from the standpoint that the positive pole is constricting in action.

Consequently, an ideal current to use on these cases is a sine wave galvanic current. In this way we employ the constricting or contracting action of the positive pole by making it the active pole, and also we have the advantage of the contracting type of current by using the sine wave.

Fig. 4. Nickel-plated curved vaginal electrode for use with the various currents. From this electrode there is very little phoretic action, if any.

Cases of subinvolution of years standing will respond to this treatment with very remarkable successes. We grant that this may be difficult to believe, but all electrotherapists will testify to the truth thereof.

Fig. 5. Neiswanger's vaginal cataphoretic electrode. A perforated copper ball through which any solution may be forced into a gauze or cotton packing around it within the vagina.

UTERINE MALPOSITION

Another common picture that presents itself to the gynecologist is that of a uterus retroverted and bound down by adhesions. This condition is responsible for a great many of the ills that tear down the health of women who would in other respects be strong and healthy.

As for the pathology and etiology of these cases any good work on gynecology may be readily consulted. There is no need to go into details in this article which, of necessity, must be short.

Practically all of these cases may be benefited, some more than others, and the prognosis, of necessity, depends upon the causes and conditions present. If there is a bad prolapse due to a torn and weakened perineum, then the case cannot be treated by electrotherapy with any chance for success until the perineum is repaired surgically.

Another cause of malposition is to be found in pressure from above. A roentgenogram should always be made to determine the extent of sigmoid loops, enteroptosis, etc. One of the commonest causes of pelvic inflammation and malpositions is to be found in the pressure of these loops in the colon. This cause should always be investigated, and if found, treatments aiming to correct this primary trouble should be given. We might add that electrotherapy offers one of the best and most successful methods of relieving such pressure. Surgery is not indicated in this work until electrotherapy has failed; and if the latter is given wisely, few cases will ever reach the surgeon.

Cases of malposition or flexion, even where there are quite extensive adhesions, can often be greatly relieved. Cases with no adhesions can almost always be permanently cured, if the above causes are not involved.

Replacement by physiotherapy does not involve hospital work; it does not require any loss of time and it avoids anesthesia which always carry a definite danger, even though small. Physiotherapy does take advantage of the specific polar actions of the galvanic current at the sites of application.

If we have inflammation, then we must use the positive pole as our active pole, although it tends to harden down any exudate. The negative pole will increase inflammation—but *it will not cause inflammation.* Therefore we seek to get rid of the active inflammation first, and then use the negative pole as the active one because of its softening effect.

Some operators use the intrauterine method of applying the electrodes. We believe the best way is to use the intravaginal method and then the intrauterine if the first method fails.

The technic employed is to use a vaginal ball electrode which has been covered with cotton and connected to the positive pole, if there is inflammation. If there is no inflammation, connect it to the negative pole. Press the electrode against the mass of adhesions and allow from 20 to 40 milliamperes of current to pass for about 15 minutes. Repeat this treatment three times weekly.

It is always good practice to follow negative galvanism with a few minutes of interrupted sinusoidal current to hasten the absorption of products set free by the negative pole.

When the uterus has finally been freed from adhesions, then it may be repositioned either bimanually or by the use of a uterine electrode as a repositor. We believe that the uterus should be invaded only as a last resort. After the uterus has been repositioned, then a sine wave current passed from the vagina to the abdomen will often—almost always—help to get the uterus to contract in its normal position and stay there. Tampons may be used, if desired, with the idea of helping to maintain the correct position for a time after the treatment.

We have seen cases of malposition yield to electrotherapy after years of other treatment. We recently had a case that had been under various treatments for over five years, and had had everything done except surgery. This case yielded to electrotherapy in less than a month. An occasional case will be practically cured in one or two treatments. A large number of them will yield to a dozen treatments.

Where cases are associated with other pelvic disturbances, already explained, these disturbances must be cleared up first. In a great many cases there will be an associated endometritis, which subject will be discussed in the next article.

"You can't fool all the people all the time," said Lincoln.

The people need osteopathy, but they don't realize it, and thousands are fooled by those who undervalue osteopathy.

O. M. **O. H.**

The day of osteopathy is coming, when the people will value health, and osteopathy as a means to health.

Help to speed the day by circulating these osteopathic health messengers.

AMERICAN OSTEOPATHIC ASSOCIATION

844 Rush Street, Chicago

State and Divisional News

OSTEOPATHIC CONVENTIONS

ANNOUNCEMENTS

Kansas State Convention, Topeka, October 5-6.
Missouri State Convention, St. Joseph, October 17-19.
New York State Convention, Schenectady, October 28-30.

CALIFORNIA

State Convention

The twenty-sixth annual convention of the California Osteopathic Association was held at the Fairmont Hotel, San Francisco, July 18 to 21. The president, Dr. F. O. Edwards, presided at all sessions. The official program was as follows:

MONDAY, JULY 18

8 to 9—Registration.
9:00—"Physiology of Connective Tissue"—E. W. Davidson.
11:00—Address of Welcome.
Announcements.
2:00—"Intestinal Toxemia"—H. E. Beckwith.
1. Anatomy (with lantern slides), Lorenzo Whiting.
2. Physiology.
3. Pathology (with microprojector).
3:30—"The Prostate"—Wallace C. Clark.
8:00—Reception.

TUESDAY, JULY 19

8:00—"Treatment of Bone and Joint Disorders"—Chas. H. Spencer.
10:00—Business (including nomination of officers).
2:00—"Diagnosis and Treatment of Intestinal Toxemia"—H. E. Beckwith and L. D. Whiting.
2:30—"The Pre-School Child, a Challenge to the Pediatrician"—Evangeline N. Percival and Edward S. Merrill.
6:45—Banquet.

WEDNESDAY, JULY 20

8:00—Infectious Diseases of Childhood.
Early Diagnosis—Lily G. Harris.
Treatment—C. L. Nye, Susan H. Hamilton, Georgia B. Smith.
10:00—"Tuberculosis as a Complication of Pregnancy"—Mary Alice McConaughy.
2:00—Outing.

THURSDAY, JULY 21

8:00—Technic—speaker to be announced later.
10:00—"Osteopathic Prognosis in Some Common Disorders"—L. van H. Gerdine.
11:00—"Laboratory Diagnosis."—C. L. Nye.

The committee chairmen were: Reception, Dr. Emilie V. Sutton; entertainment, Dr. Rose Vanderburgh; finance, Dr. W. W. Vanderburgh. The golf tournament arrangements were in charge of Dr. Forbes.

Citrus Belt Osteopathic Society

The monthly meeting was held in Pomona on June 9, about twenty-five being present. Dr. Dain L. Tasker gave an illustrated lecture on Diagnosis by the Latest X-ray Methods. The society decided to invite the state association to hold its annual convention at Riverside next June.

East Bay Osteopathic Society

The annual banquet and installation of officers, reports the Alameda Star, was held June 18, Dr. Hugh Penland acting as toastmaster. Dr. C. J. Gaddis spoke on Causative Factors in Cancer, and Dr. Joseph Swart of Kansas City College lectured on and demonstrated Osteopathic Technic.

Long Beach Osteopathic Association

The June meeting, held in the parlor of the Cooper Arms, was addressed by Dr. L. van H. Gerdine. Dr. F. and Mrs. Beggs entertained several of the members at dinner at the Pacific Coast Club before the meeting.

Orange County Osteopathic Association

The regular monthly meeting was held June 9 at the home of Dr. H. G. Carlin, Anaheim. The following new officers were elected: President, Dr. W. W. Illsley, Fullerton; vice president, Dr. R. O. DuBois, Orange; secretary-treasurer, Dr. Mabel Vance Tremain, Santa Ana.

Sacramento

According to the annual report of the board of osteopathic examiners, Sacramento has fifteen osteopathic physicians, says the Sacramento Union.

San Diego Osteopathic Association

The president, Dr. Vera George, was hostess at the June meeting. A business meeting preceded the social hour.

Tri-County Osteopathic Association

At the June meeting, which was addressed by Dr. Gaddis, the following officers were elected: President, Dr. Bertha H. Harter; secretary, Dr. M. Elise Carlsen, Santa Barbara; delegate to state convention, Dr. A. P. Ousdal, Santa Barbara.

FLORIDA

Miami Osteopathic Association

Dr. C. C. Reid, Denver, Colo., gave an address on Efficiency at a dinner given in his honor by the association at the Alcazar Hotel.

HAWAII

The Hawaii Osteopathic Society, composed of the nine practicing osteopathic physicians of Honolulu, met in regular monthly session Saturday afternoon, June 4. Being the last meeting before the summer vacation, it was given over to business, and a good time socially, consisting of swimming, dancing, and at the end of the day a sumptuous picnic dinner. The meeting was held at the Trail and Mountain Clubhouse, Waimanalo Beach, sixteen miles from the city.

At the business session Dr. Emily Dole and Dr. Ira T. Lane were elected delegates to the A. O. A. convention at Denver. Dr. Evalena Fleming, president of our local society, will also attend the convention, with a possibility of others.

Drs. Morris C. and Myrtle J. Augur, who have returned to Honolulu after an absence of two years, were among those present, and reinstated to membership in the society.

Officers for the ensuing year are as follows: President, Dr. Evalena Fleming; vice president, Dr. Josephine Morelock; secretary-treasurer, Dr. Grace Anderson.

Members of the Osteopathic Board of Examiners are as follows: President, Dr. Isabelle Morelock; vice president, Dr. A. O. Scharff; secretary, Dr. Emily Dole.

We are 100% in membership of the H. O. S. as well as the A. O. A.

A. O. SCHARFF,
Publicity Committee.

IDAHO

New State Officers

New officers were elected as follows at the recent state convention in Lewiston: President, Dr. Andrew McAuley, Idaho Falls; vice president, Dr. Dwight L. Clark, Lewiston; secretary-treasurer, Dr. F. H. Thurston, Boise. The 1928 convention will be held at McCall, Payette Lake.

An interesting feature of the convention was the joint luncheon given by the Lewiston Commercial Club, at which the guests were the county school superintendents of Idaho, who were also in convention, and the members of the state osteopathic association. President O. M. Mackey of the Commercial Club presided.

The convention ended with a trip up the Snake River to Ten-Mile Warehouse, where the party landed and had a feast of cherries.

ILLINOIS

South Side Osteopathic Physicians' Society (Chicago)

This society was organized on October 14, 1926, and has met at luncheon every Thursday noon since that date without interruption.

There are only two officers, a president and a secretary, and no dues, with the exception of a dollar each, collected occasionally to meet the cost of printed cards for the purpose of notifying each member each week.

The luncheons are conducted in a manner similar to

those of the Kiwanis or Lions Clubs, at which we discuss our local and professional problems.

The society has been able to secure many interesting speakers, such as professors from the University of Chicago, members of the staff of the central office of the American Osteopathic Association, members of the faculty of the Chicago College of Osteopathy, and a State Senator who spoke to us during our legislative fight. Also, the different members of the society have had their innings, and have contributed many interesting discussions. The attempt has been made each time to get away from any cut-and-dried formal discussion.

The membership roll contains forty names, and the attendance at the luncheons vary from twelve to thirty members. We are occasionally honored by the presence of out-of-town members of the profession.

On February 10, 1927, the society was cordially invited to a luncheon at the home of one of our members, Dr. Ella Taylor Dodge, where Professor Benjamin Robinson talked to us on some of the recent findings in Egypt and other parts of the Old World, and read letters that were written in the first century.

A committee is working out a plan whereby the society will conduct somewhat of an extension postgraduate course, devoting one entire evening a week to a lecture. The subject and the speaker will be selected, and as much time devoted to each subject as the society desires.

In this way, and by meeting in different homes or offices, it will be possible for the different members to bring interesting cases, so that a clinic can be held after the lecture to directly apply the principles of the lectuer to a real case.

Thus we will have an entire week between lectures and demonstrations in which to study and put into practice those things that are discussed each time. In this way we feel that we will get more than we would from a short intensive course, with no time between discussions. There will also be no loss of time from our practices.

At present it is the intention of the society to charge a small fee to members for each lecture, so that each speaker will be paid sufficient to make it worth his time to come.

It is also felt that in meetings of this sort the members will receive stimulus and new ideas for the hospital. Dr. Floyd F. Peckham has given us a great deal of information on the hospitalization of patients, and as house physician will no doubt give us much more information from time to time.

It is the hope and desire of the South Side Osteopathic Society that such organizations will be created throughout the United States and Canada. Such an organization is easy to manage, and pays tremendous dividends both to the individual and the profession.

It requires interest and enthusiasm to start with, and pays interest and enthusiasm in return.

ROBERT CLARKE, *Secretary.*

IOWA

Des Moines County Osteopathic Association

New officers were elected at the June meeting as follows: President, Dr. J. S. Baughman, Burlington; vice president, Dr. F. E. Shaw, Burlington; secretary-treasurer, Dr. Bessie Nudd, Burlington.

KANSAS

Arkansas Valley Society of Osteopathic Physicians and Surgeons

The June meeting and dinner were held in Kinsley, the business session in the offices of Dr. C. F. Smith. Papers, followed by discussion, were read by Dr. C. J. Rounds on Reflexes and Their Significance in Diagnosis, and by Dr. T. B. Powell on Obstetrics.

Drs. V. A. Leopold, R. A. Leopold and R. M. Cooper, all of Garden City, were elected members.

Southern Kansas Osteopathic Picnic

There were 100 present at the Cowley County picnic on June 9, representatives being present from Wichita, Winfield, Arkansas City, Cedarville, Howard, Sedan, Caney, Independence, Coffeyville, Cherryvale, Fredonia.

KENTUCKY

Jefferson County Osteopathic Society

Dr. Carl J. Johnson spoke on Lumbago, Its Cause and Cure, at the June meeting, which was held in the Francis Building, Louisville. Dr. R. H. Miller led the round table discussion after the address.

MASSACHUSETTS

Boston Osteopathic Society

At the annual meeting on June 11 the following new officers were elected: President, Dr. Wallace Muir; vice president, Dr. Marjorie Johnson; secretary-treasurer, Dr. Cecile S. Moore; curator, Dr. Sidney Ellis; director, Dr. Charles Grapek.

MAINE

Portland Osteopathic Society

The members met on June 27 at the Atlantic House, Old Orchard, Dr. Marguerite Stevens acting as hostess. An interesting talk on Hydrotherapy was given during the evening.

MISSOURI

Buchanan County Osteopathic Association

At the luncheon on June 16 at the Robidoux Hotel, St. Joseph, Dr. T. O. Pierce showed some motion pictures of Lindbergh on his own machine.

Osteopathic Association of Central Missouri

The June meeting and banquet was held at Columbia on the 16th. The next meeting will be held at Mexcio on August 25.

Southwest Missouri Osteopathic Association

The bi-monthly meeting was held July 14 at Joplin, when Dr. O. L. Dickey of Joplin and Dr. M. R. Maxwell of Mount Vernon were the speakers. A musical program in charge of Dr. A. G. Carroll, Aurora, preceded the addresses.

NEBRASKA

State Convention

The annual convention was held at Scottsbluff July 20, 21. The principal speaker was Dr. George M. Laughlin, while a children's clinic, for children from six months to twelve years of age, was conducted by Dr. Jenette H. Bolles, assisted by a corps of specialists.

Joint Meeting at McCook

The Southwestern Nebraska and Northwestern Kansas Osteopathic associations met June 25 at McCook, the greater part of the time being spent in discussing the possibility of organizing an osteopathic hospital and clinic service in McCook in the near future, it is reported. After dinner at the Keystone Hotel the business conference was held at the office of Dr. M. T. Boulware. Arrangements for the next meeting, to be held the latter part of September, were also discussed.

Lancaster County Osteopathic Association

About twenty members attended a luncheon and discussion held July 6. Dr. Frank B. Moon, director of physical education at Cotner College, spoke on The Importance of Physical Education, and Dr. H. E. Litton, editor of the Journal of Osteopathy, discussed progress in the profession during the past year.

NEW JERSEY

Annual State Meeting

The twenty-sixth annual meeting of the New Jersey Osteopathic Society was held June 18 at the Hotel Suburban, East Orange. Dr. Chester D. Losee, Westfield, was elected president.

OHIO

Akron District Osteopathic Association

The regular meeting was held June 22 at Congress

Lake Country Club. Dr. John M. Hiss, Columbus, was the principal speaker.

Lorain and Erie County Osteopathic Association

The final meeting of the season was held at the summer home of Dr. Lester Mylander, Rye Beach. Dr. H. L. Knapp, Elyria, presided at the business meeting.

OKLAHOMA

State Convention

It was accorded by mutual consent that this, the twenty-fourth, was one of the best annual meetings ever held by the Oklahoma association. There was a splendid spirit of harmony and cooperation and a closer union of the individual physicians, which I hope will produce a stronger state organization and of course will make a more valuable unit in our national association.

To Dr. Geo. M. Laughlin should go the large part of the credit in bringing about this stronger organization. If Dr. "George" can give not only a half million dollars, but his life work, to a profession of seven thousand men and women, with many of whom he does not agree in regard to several matters and a number who are severe "katabolic" critics of his, surely a state organization, and the national as well, can lay aside petty differences and pull together for the good of osteopathy.

To go further, and on thinner ice, I wish to personally commend Dr. Laughlin for his words that helped to bring about a closer understanding between the "youngsters" and the "old-timers." He urged that we prepare ourselves to be complete physicians. This has been a "bone" of contention between the younger and older men for some time. There have been extremists on both sides, and Dr. Laughlin's stand is a good one to know and follow. He can lead us along the path of "progressive conservatism."

Unfortunately Oklahoma's delegates to the Texarkana meeting, at which plans were to be made for a section society composed of Arkansas, Louisiana, Texas and Oklahoma, could not attend. Since none attended this meeting, all discussion of this matter was tabled by the society. Resolutions commending the speakers of the convention, the entertainers, the officers of the association, Mr. Eugene Kerr, and the Oklahoma City osteopathic physicians, for all their services, was unanimously passed.

The Legislative Committee reported upon the necessity for legislative work during the year and gave a financial report. They were accorded a rising vote of thanks.

The new constitution and by-laws, as offered by the A. O. A., came under discussion. A modified form of this instrument had been furnished every member of the association, and it was decided to table this proposition for one year.

The following were nominated and elected officers for the ensuing year: President, Dr. C. P. Harth, Ponca City; vice president, Dr. C. R. Eitel, Tulsa; secretary-treasurer, Dr. C. F. Stauber, Oklahoma City, and the new trustees are Dr. F. A. Englehart, Oklahoma City, and Dr. W. S. Corbin, Chickasha.

Our new president addressed us following the election. He pledged his best service to the association and asked that all of us cooperate with him and the other officers for the best interests of osteopathy and the association.

Our technical program was of real benefit to everyone present. Dr. Geo. M. Laughlin of Kirksville and Dr. H. C. Wallace of Wichita were here, and they always have a message of encouragement and help and give real inspiration. A newcomer to Oklahoma Convention was Dr. J. C. Snyder of the staff of Still-Hildreth from Macon, who handled a difficult subject well. We hope Dr. Snyder will come again soon. He said he was here as a substitute for Dr. Hildreth, and we think he is an evidence of Dr. Hildreth's judgment.

That part of the program handled by the members from Oklahoma should be a lesson to us. We should no longer hide our light under a bushel. We have men to be proud of if they are but given a chance to show their "stuff."

The next meeting place is to be decided by the trustees, but Sapulpa or Tulsa will probably act as host next year. There is a specific reason for this. They had such a good time at Oklahoma City the association wanted to meet in one of its suburbs next year.

C. F. Stauber, D.O.

OREGON

New State Officers

The following officers were elected at the annual convention of the Oregon Osteopathic Association at Portland: President, Dr. J. L. Lynch, Salem; vice president, Dr. Ruth L. Eaton, Oregon City; secretary-treasurer, Dr. G. L. Jordan, Albany; trustees, Dr. A. P. Howells, Albany, Drs. R. C. Virgil, Salem, J. L. Ingle, La Grande; delegate to national convention at Denver, Dr. L. H. Howland, Portland.

Next year's convention will be held at Portland.

PENNSYLVANIA

Committee on National Welfare

Dr. Henry Bellew, Philadelphia, sends this interesting report on the work of this committee, of which he is chairman:

Last February I sent you a letter explaining the aims of the "Osteopathic Committee on National Welfare." I asked you to tell me if you knew of any other city or county that had undertaken a concerted drive to inform people of osteopathy. We have long had considerable cooperation in Philadelphia, as evidenced by our magnificent hospital and college. It is estimated that about one-fourth of the people in Philadelphia have in some way heard of osteopathy. There is a vast amount of educational work to be done. It is admitted by most osteopathic physicians that they could render upwards of $10,000 worth of service a year if the people would take it. Educational work of the right kind will eventually acquaint people with the symptoms that indicate the need of osteopathic attention.

We plan to give radio talks. I gave the first talk on June 10, talking twenty-two minutes and giving about half the matter in the enclosed pamphlet on cancer. We got up the enclosed pamphlet on cancer to meet the veiled sneers and attacks of the medical men in their local campaign to control cancer. Over 10,000 of these have been distributed. It is hoped to distribute many thousand more before the year is out. I compiled this pamphlet from the most recent authoritative statements. It was then censored by Drs. E. G. Drew, A. M. Flack, C. J. Muttart, O. J. Snyder, E. Jacobson, and valuable suggestions offered by them were included, as well as others given by Dr. Clayton at the college, Dr. C. Paul Snyder, H. Walter Evans, Lloyd, etc. Dr. Millard sent me a very fine article on lymphatic treatment to prevent cancer, which was incorporated, in substance. The article gives all the hope there is for cancer, without, on the other hand, raising false hopes. It tells the truth. The facts presented, if put to use, will save lives. I sent out some 1,100 to my patients, and within ten days received six new patients, only one of which was cancer, and an unsuspected case at that, probably cancer of the pancreas.

SOUTH DAKOTA

State Convention Program

The twenty-third annual meeting of the South Dakota Osteopathic Association will be held at the Wentworth Hotel, Parker, August 4, 5. The official program is as follows:

THURSDAY, AUGUST 4

9:00—Registration.

9:30—President's Address, Dr. J. G. Follett, Watertown.
"Gynecology," Dr. C. Rebekka Strom, Sioux Falls.
Lecture, Dr. J. H. Styles, Jr., Kansas City.

1:30—"Food and Food Combinations," Dr. T. D. Bowman, Yankton.
"A Few Surgical Indications and Procedures in Ear, Nose and Throat Diseases," Dr. W. G. Rosencrans, Vermilion.
Lecture and Clinics, Dr. Styles.
Reports of A. O. A. Convention by those who attended.

6:15—Banquet.

FRIDAY, AUGUST 5

9:00—Annual Business Meeting, Election of Officers, Reports of Committees.
Lecture, Dr. Styles.
"High Points in the Treatment of Gastro-Intestinal Diseases," Dr. J. L. O'Neill, Mitchell.

1:30—"Ambulant Proctology," Dr. C. E. Schoolcraft, Watertown.
Discussion by Dr. J. H. Cheney, Sioux Falls.
"What a General Practitioner Should Know About the Eye," Dr. J. W. Pay, Milbank.
Lecture and Clinics, Dr. Styles.

TEXAS

Southeast Texas Association Holds First Convention

Organized at Houston only six months ago, the Southeast Texas Osteopathic Association has had a rapid growth. The first convention was held June 18 at the Galvez Hotel, Galveston.

The principal subjects and speakers were: "The Examination of Physicians for Licenses in the State of Texas," Dr. Roy Russell; "New Monroe Method of Checking and Diagnosing Metabolism," Drs. L. M. Farquharson and Houston A. Price, both of Houston; "Proper Diet for the Sick and the Well," Dr. R. L. Livengood, Bay City; "Treatment of Hemorrhoids Without Surgery," Dr. Vincent A. O'Rourke, Houston; "Effect of Wrong Eating on Stomach and Intestines, Hemorrhoid and Other Rectal Diseases and Their Non-Surgical Treatment," Dr. Ben E. Hayman, Galveston; "Diseases of Children," Dr. J. R. Alexander, Houston; "Diabetes," Dr. A. L. Deveney, Austin; "How to Keep Well in Summer," Dr. E. Marvin Bailey, Houston.

A banquet was held at night and a round of golf the following afternoon. The next meeting will be held in October, place and date to be decided by the trustees.

UTAH

State Convention

The annual convention of the Utah Osteopathic Association was held July 1 and 2 at Salt Lake City, with the following program:

FRIDAY, JULY 1

10:00—"Strap Technic for the Foot," Dr. J. Swart, professor of technic, Kansas City College of Osteopathy and Surgery.

11:00—"Selection of Normal Diet," Dr. Lillian Whiting, professor of obstetrics and dermatology, College of Osteopathic Physicians and Surgeons, Los Angeles.

2:00—"Osteopathic Technic of the Lumbar Spine and Innominates," Dr. Swart.

3:30—"Prophylactic Care of the Expectant Mother," Dr. Lillian Whiting.

5:30—The Association went to Saltair, where they dined at the Saltair Cafe. Dancing followed.

SATURDAY, JULY 2

8:00—"Technic of the Cervical and Dorsal Regions," Dr. Swart.

10:00—"Sterility," Dr. Lillian Whiting.

Noon—Business meeting and election of officers.
The following officers were elected: Dr. R. H. Prindle, Ogden, president; Dr. Pearl Nelson, Salt Lake City, vice president; Dr. B. W. Clayton, Salt Lake City, secretary-treasurer.

2:00 to 4:00—Clinics.

WASHINGTON

State Convention

The twenty-seventh annual convention of the Washington Osteopathic Association was held at the Washington Hotel, Seattle, June 23-25, under the presidency of Dr. W. E. Waldo.

The first and second days were mainly devoted to lectures by the two special speakers, who subjects were: Dr. Lillian M. Whiting, Los Angeles—"Prophylactic Care of the Expectant Mother"; "New Developments in Obstetrics"; "Fundamental Principles Underlying Selection of Normal Diet"; "Diagnosis and Treatment of Some Common Skin Diseases." Dr. J. Swart, Kansas City—"Strap Technic of the Neck, Chest, Shoulders and Ribs"; "Strap Technic of the Lumbar Spine and Innominates"; "Strap Technic of the Foot"; "Points of Interest to the General Practitioner."

The closing day was devoted largely to technic. A surgical clinic was held at the Waldo Sanatorium-Hospital from 7 to 10 a. m., followed by a lecture by Dr. A. D. Becker. Drs. A. B. Ford and A. D. Becker dealt specially with technic in the afternoon.

The new officers elected were: President, Dr. V. E. Holt, Yakima; first vice president, Dr. F. W. Winters, Seattle; second vice president, Dr. Lydia Merrifield, Seattle; trustees, Drs. W. E. Waldo and A. D. Becker, Seattle; secretary, Dr. C. B. Utterback, Tacoma; treasurer, Dr. H. F. Morse, Wenatchee.

The social events of the convention were: O. W. N. A. luncheon, Thursday; get-together luncheon, Friday; jamboree at McKenzie's, Saturday night.

King County Osteopathic Association

On June 8 officers were elected as follows: President, Dr. E. W. Pruett, Seattle; vice president, Dr. M. D. Young, Seattle; recording secretary, Dr. Claude C. Heckman, Seattle; treasurer, Dr. Carrie Benefiel, Seattle.

Pierce County Osteopathic Society

The new officers recently elected are: President, Dr. W. P. Goff; vice president, Dr. R. H. Slayden; secretary-treasurer, Dr. G. S. Wallace.

WEST VIRGINIA

State Convention

The twenty-fifth annual meeting of the West Virginia Osteopathic Society was held in the Waldo Hotel, Clarksburg, June 27-28. All records for attendance were broken at this meeting, with visiting osteopaths from Ohio, Pennsylvania and Virginia.

It was remarked by many who had the pleasure of hearing the full program that the character of the papers read and the talks given were of as high a class as ever were heard at an A. O. A. meeting.

The society authorized the secretary to join the Society of Divisional Secretaries and pay the dues from the treasury.

The character and quality of the treatments given by osteopaths over the country were discussed. The opinion was expressed "that an osteopath should treat his patient as he would like to be treated."

The question of the D. O.'s use of hospitals was discussed. The consensus of opinion seemed to be "that osteopathic physicians should establish their own hospitals as conditions warranted." While it is all right to fight for our rights, our ultimate goal will not be attained in that manner.

The society voted to issue a bulletin, quarterly or oftener, which will be mailed to senior students of our schools, as well as to the D. O.'s practicing in the state. The bulletin will be edited by the secretary-treasurer, and the size and extent to which the society will go into this field will have to be gradually worked out. For some years a small bulletin has been published from time to time.

The society voted to go on record as favoring the idea "that Kirksville be the next meeting place of the A. O. A., and that instead of a regular program a week of P.G. work be indulged in."

On Monday evening a banquet was enjoyed by forty-four osteopaths and friends.

The publicity given to this meeting by the newspapers was astounding. Column after column was carried by all the papers of the state. More than the Medical Society of West Virginia will ever hope to get.

The 1928 convention will be held in Wheeling. While Wheeling is one of the largest cities of the state, she has never had an osteopathic meeting.

Officers elected for the following year are as follows: President, Dr. T. V. Sullivan, Wheeling; vice president, Dr. A. P. Meador, Hinton; secretary-treasurer, Dr. G. E. Morris, Clarksburg; delegate to Denver, Dr. A. P. Meador, Hinton; alternate, Dr. M. A. Boyes, Parkersburg; trustee, Dr. J. J. Henderson, Charleston.

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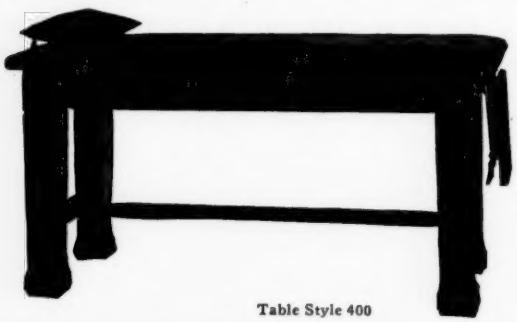

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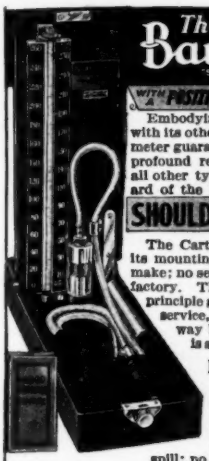

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Tuttle, Lamar, from Miami, Fla., to Box 201, Chatham, Cape Cod, Mass.

Van Arsdale, Charles O., from 209 Vine Ave., to 41 S. Prospect Ave., Park Ridge, Ill.

Van Duzer, C. M., from New Britain, Conn., to 21 Field Point Rd., Greenwich, Conn.

Voss, John H., from Detroit, Mich., to Box 208, Albert Lea, Minn.

Wales, Anna, from Kansas City, Mo., to 329 Morris Ave., Providence, R. I.

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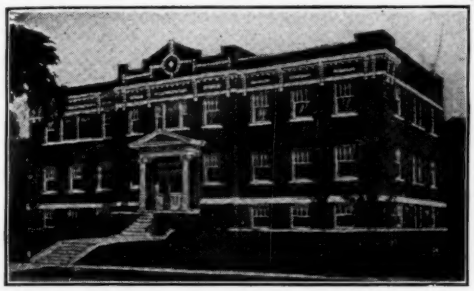

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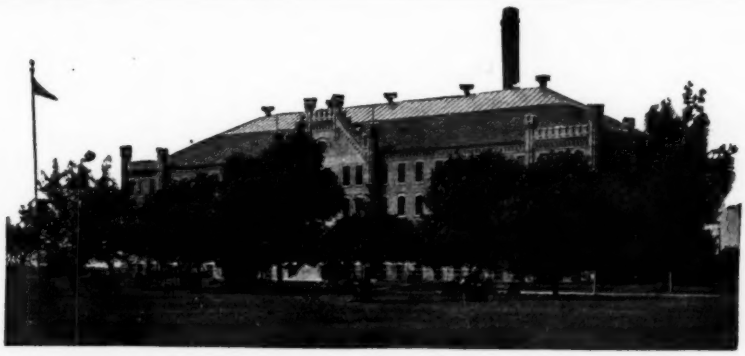

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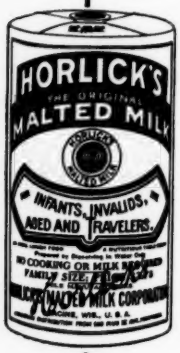

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